EXHIBIT "D"

IN THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF TEXAS HOUSTON DIVISION

VIRGINIA ELIZONDO, §
Plaintiff, §

v. § Civil Action No. § 4:21-CV-01997

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SPRING BRANCH INDEPENDENT SCHOOL DISTRICT, ET AL.,

Defendants.

ORAL DEPOSITION OF

JOHN R. ALFORD, PH.D.

MARCH 24, 2022

ORAL DEPOSITION OF JOHN R. ALFORD, PH.D., produced as a witness at the instance of the Plaintiff, and duly sworn, was taken in the above-styled and numbered cause on the 24th day of March, 2022, from 10:27 a.m. to 2:16 p.m., before John G. Rochelle, CSR in and for the State of Texas, reported by machine shorthand, at the SBISD Athletic Complex, 1050 Dairy Ashford Street, Houston, Texas, pursuant to the Federal Rules of Civil Procedure and the provisions stated on the record or attached hereto.

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INDEX	
	PAGE
Appearances	2
JOHN R. ALFORD, PH.D.	
Examination by Mr. Golando	5
Signature and Changes	-171
Reporter's Certificate	172
EXHIBITS	
NO. DESCRIPTION	PAGE
Exhibit 1	13 n.D.
Exhibit 2 Expert Report of John R. Alford, Ph.D. dated February 21, 2022	64
Exhibit 3 Expert Report of Robert M. Stein, Ph.D. dated January 20, 2022	69
Exhibit 4 Article entitled "Political Attitudes Vary with Detection of Androstenone"	
Exhibit 5 Article entitled "At-Large Elections and Minority Representation in Local Government"	88
Exhibit 6 Document entitled "Letter of Agreement for Services of Consulting and Testifying Expert"	163

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1	- 1 '1 '.
1	Exhibit 7
0	Article entitled "Republican Party of Texas
2	Doubles Down on Local Election"
3	
	Exhibit 8
4	Article entitled "Do District-Based Elections
	for School Board Help Minority Candidates Get
5	Elected?"
6	
7	
8	
9	
LO	
L1	
L2	
L3	
L4	
L5	
L6	
L7	
L8	
L9	
20	
21	
22	
23	
24	
25	

1 (Exhibit Nos. 1 through 8 premarked.) 2 JOHN R. ALFORD, PH.D., 3 having been first duly sworn, testified as follows: 4 EXAMINATION 5 BY MR. GOLANDO: 6 Good morning, Dr. Alford. ο. 7 Α. Good morning. 8 My name is Martin Golando. We've met before. 9 I represent Virginia Elizondo in this case. And you've 10 read the pleadings, and you've read the expert reports; 11 is that correct? 12 Α. That's correct. 13 And you've had your deposition taken -- I don't 14 know -- 140 times, something like that? 15 I don't know if it's that many times, but it 16 seems like that many times. 17 0. So you're well-acquainted with the process. Ι 18 don't think I've ever deposed you before, but --19 Α. I don't think so. 20 -- I am a little inarticulate. I talk a little 21 mushmouthy. And so if you don't understand what I'm 22 asking you to do, or asking you to say, it's my fault. 23 So just ask me to repeat it, or I'll have him repeat it 2.4 to you. It's just I want to make sure that we're very 25 clear on the record the questions and answers.

The second instruction, I think, is the -- I need you to 1 2 wait till I finish asking the question, and then you can 3 And I will try not to interrupt you. 4 would try not to interrupt me, I'd be appreciative. And 5 if you don't understand anything I'm saying or if you don't understand the question, again, just let me know, 6 7 and we'll try to work it through. I promise. 8 So would you mind telling me what is your 9 full name for the record, please? 10 It's John Richard Alford. Α. 11 And where do you live, sir? 0. 12 Α. I live in Houston, Texas. 13 Okay. And did you go to high school here? 0. 14 think you did. Right? 15 I went to -- it's a good, good question. 16 went to -- I went to Clear Creek High School, which is 17 of course in Galveston County. And we lived on the --18 what would not be in Houston, but at the time had not 19 yet been annexed so --20 Interesting. Fair enough. And so where did 21 you go to school first for college? 22 University of Houston. Α. 23

- And when were you there roughly? Q.
- Α. Late '70s.

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Okay. Did you ever do any drama there? 0.

1 Α. No. 2 Q. Because they had a great drama teacher. 3 don't know if you knew that or not. 4 Α. Oh, yeah. Like world-renowned, really amazing. 5 And a very -- the University of Houston is a place I'm 6 very proud of. 7 I would be, too. So if you watch any of the 8 Lakers series, the guy who's playing Bill Sharman --9 Α. Yeah. 10 -- actually went to the University of Houston 0. 11 at roughly the time you were there. 12 Α. Yeah. 13 0. I didn't know if you --14 Α. Yeah. 15 0. -- if you knew him or not. 16 Α. Yeah. They had a pretty good basketball team 17 back then, too. 18 They did. Is that Calvin Hayes or --0. 19 Α. Yeah. Yeah. 20 Yeah. Fair enough. 0. 21 Yeah. When I was in high school was sort of Α. 22 their -- it was their real peak for U of H basketball. 23 I guess I was in middle school when -- I think when 2.4 they -- when they beat UCLA, which was just spectacular. 25 And it was 1973? Ο.

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Yeah. Yeah. So it would have been -- no. Α. Yeah, I guess I would have been there. Pretty -- you know, I spent a lot of time talking to people from the -- sort of that era and the era just before I was It was just a really interesting time. And Gene Locke has some fascinating stories about his time at U It was just a -- you know, it was a very short time before I was there, but a different world than it was by the time -- by the '70s. The '60s at U of H was quite different. So it's interesting. That's interesting. And after that you went Q. and got an MPA; is that correct? I got a -- yes. I got a bachelor's and a Α. master's of public administration. And then you went to Iowa, correct? 0. Α. Iowa. Correct. 0. And when were you in Iowa? So Iowa would have been from, say, '79 to '84. Α.

- Something like that.
- And what did you study at Iowa? What was your major course of study?
- So American politics, methodology, and public policy.
- And did you study Bernie Grofman then and his ecological regression at the time, or what did you --

what was your first introduction to regression?

- A. That probably would have been the first time I was familiar with that. And then when I -- I continued to work with some people at U of H, and so I -- and Bernie back and forth for a time period because mother lived in Houston for a while. So I met him. And we didn't ever actually work on any research projects together; but, you know, he's a -- he's an amazing fella.
- Q. He is. He's extraordinarily impressive. So you were at Iowa, got your Ph.D., and you came back to Houston? Or what was your first job out of Iowa?
 - A. No. I got a job at Oakland University.
 - Q. In Michigan?
 - A. Yes.

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- Q. Okay.
- A. I wasn't aware of the fact it was in Michigan. When I accepted the interview I thought it was in Oakland. Foolish me. You know, pretty much -- I was born in Japan, but I pretty much grew up in Houston. And so Iowa was a very cold experience for me.
 - Q. I bet.
- A. I was excited about getting somewhere else, and I wasn't really thinking about going kind of further north. And so I went to -- I went to Oakland. I was

there for a year. And then I got recruited by
University of Georgia. So I was at University of
Georgia for a couple of years. And then the professor
who had been my mentor at U of H in the meantime had
jumped to Rice, and he recruited me to come back to
Houston.

- Q. Must have been nice to come home, I guess?
- A. Yeah.

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- Q. So you said you were born in Japan? Is that correct?
 - A. Yes.
- Q. Was your dad in the military, mom in the military?
- A. My dad is a -- yeah, an Army officer, and so we -- it was during the Korean war. He was stationed in -- he had been in the Pacific in World War II but then came back in the Korean war and was in a -- running a supply area in southern Japan. That's where I was born.
- Q. I didn't know that. I guess you bounced around a bit, huh, after that or --
- A. Iran, Vienna, lots of different places in the United States. When he retired from the military out of -- we came back to Fort Bliss. He retired out of Fort Bliss and then immediately took a job with a

construction company in Iran. Then we spent a year in Vienna, then a couple years in Washington, D.C., where he was doing consulting, and then Corpus Christi and some other places before he -- he finally settled down, went to work for NASA when they were just building the -- building that up. And that's where -- so that's where I settled in and went to middle school and high school. But a lot of moving around before that.

- Q. Me too. Not quite to Iran, but -- I'm going to hand you the --
- A. Yeah. You pretty much trump anybody with Iran because nobody lived there.
- Q. So you were in Iran during -- when there was a shah, right?
 - A. We actually met the shah.
 - O. What was that like?

A. Unimaginably weird, like -- like waking up in some kind of a weird '50s Disney movie or something because they -- this was to celebrate the opening of -- the completion of this dam project, and they completely remade the town. I mean, they just -- like they changed the -- you know, artificially sort of with paper and stuff changed the outside of the building. So they had all these gold banners everywhere. Everybody put on these fancy clothes. And just like a weird retinue of

people coming through. And, you know, it was just -- it was very, very strange.

- Q. How old were you?
- A. It was -- let's see. Six.
- Q. Wow.

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- So it was -- at the time it just seemed -- I Α. mean, everything about Iran seemed fanciful. things about Vienna seemed fanciful, too, but -- but I actually haven't been back to Iran, but I've been back to where we lived in Vienna. It's one of those things where you -- when you're a kid you think, you know, everything is weird and strange and big. And I remember talking to my brother, and I said, "You know, do you remember like when we lived in Vienna? I remember we were living in this really huge, almost like a castle on a hill, and it had a turret, and there were like" --"the people lived in the turret, and we weren't allowed to go in there." And my brother said -- he was younger. My brother was a couple of years younger than me. said, "You know, I've heard like our sister talking about that, but he said, "I'm not sure that is true." So I went back to Vienna, and it turned out it all was true.
 - Q. That's wild.
- A. Yeah.

1 So you're here pursuant to a notice of Q. 2 deposition, correct? 3 Α. Correct. 4 Have you seen the notice, sir? 5 Α. I have. 6 I'm going to hand it to you. Q. It's been 7 previously marked as Exhibit No. 1. Could you review it 8 for me and make sure it's authentic? 9 Yeah, that's what I remember seeing. 10 0. So did you see the subpoena in the back for the 11 documents? 12 Α. Yes. 13 Okay. Did you have any documents for me? 0. 14 I have -- I consulted with Mr. Crawford, and I 15 have documents that are related to my report. 16 Q. Okay. 17 And to my contract with the attorneys. 18 Did you bring them with you today? Because I 0. 19 have not seen them. 20 Α. Oh. Sorry. 21 John, are these your MR. CRAWFORD: 22 originals? 23 THE WITNESS: They're --24 MR. CRAWFORD: We can get copies made for 25 you.

1 MR. GOLANDO: Please. That would be great.

- A. So this is a -- this is just the email exchange that was related to the contract. This is the contract. And this is -- in the report I referenced a web page related to single-member versus at-large. And then I referenced a press release from the Republican Party. So those are the -- other than the documents that I consulted that were either Dr. Stein's report or his own articles he cited, that sort of thing, these are the things that both related to the contract and to materials I relied on or referenced in the report.
- Q. (BY MR. GOLANDO) This is the entirety of the documents --
 - A. Yes.

- Q. -- that you believe are responsive to the subpoena, correct?
 - A. Yes.
- Q. I'm going to give these to your counsel so he can review them and then give me what he thinks is responsive. And I'm going to have Barry review it during the deposition. And I don't think we'll have any questions about it, but if we do I want to make sure we get it tacked on at the end, if you don't mind.
 - A. Yes.
 - Q. Have you worked for Spring Branch ISD in the

past?

A. Yes.

Q. What was the nature of that engagement?

A. So I'm -- I'm not entirely sure about the specific years, but sort of the timeline, my recollection is that there was a lawsuit filed against the district previously. And it could have been in the -- perhaps in the '90s, maybe in the early 2000s, but some -- some time ago. And I was hired by Robert Heath, who was the attorney that was hired to defend the school district. And I worked with him on that. And I don't know if the -- I can't remember what the resolution of that was. It didn't go to trial. I think it was either dismissed or nonsuited. I'm not really sure.

Q. Do you remember the nature of it? Was it a voting rights lawsuit?

A. It was a -- it was a Section 2 voting rights lawsuit, and the -- it turned out that it wasn't possible to -- the only part that I had in it, my recollection is, that it started with some -- a lot of debate about whether Gingles 1 could be met, and that ended up being what the suit was either dismissed or nonsuited over, was the inability to actually draw a majority-minority district.

Q. Did you review Gingles 2 or 3 testimony?

A. I -- I just don't -- I don't remember whether that -- whether we had started that or hadn't, but I -- I certainly didn't do anything in the sense of a report on it or anything. I don't -- you know, Bob Heath may still have that information. I don't even have the records from that era anymore. But I don't -- I don't recall doing -- again, I may have or may not. I know it wasn't -- -- it never got to that stage in terms of -- either of my doing a formal report or a deposition.

- Q. Do you recall coming to an opinion about racially polarized voting in any sense in SBISD at that time period?
- A. No, I don't think -- I don't recall anything at that time period, no.
- Q. Is that the extent of your previous engagement with SBISD? Did you do anything else for them in the intervening years?
- A. So in the intervening years when -- I'm not sure exactly about the dates on this, but sometime more recently I was retained to work with counsel for the district on issues related to the districting scheme.

 So they -- the district was considering alternatives to the current at-large system, including single-member or mixed plans. There was -- I think most of my discussion

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with them had to do with alternative elections, particularly moving to something like cumulative elections. So I've been involved in the shift in Amarillo to cumulative elections. And so I think most of what I provided to the attorneys was information about kind of the nature of -- I think they had demographers that were working. I wasn't doing -- so I do both, you know, sort of redistricting lawsuits, and I also do redistricting, so I do district drawing. didn't -- I wasn't involved in drawing districts for They had some demographer doing that. them. mainly involved in sort of providing information about how cumulative elections would work and sort of what were the -- what were kind of the critical break points. One of the issues in cumulative elections are -- it's these thresholds of exclusion. And they vary depending on how many people are up. And so that was one of the questions. It's -- you know, it's really easy to meet the threshold of exclusion if you put all seven board members up in the same election, but -- but, you know, there are reasons why districts typically don't put all their board members up at the same time. So that was I think the main question that I was addressing for them, was, you know, what -- what -- what set of staggered terms involving how many members would

meet the threshold of exclusion.

- Q. Was that in 2020, or was that in 2019?
- A. I think -- I could be wrong about this, but I think there -- that this may have come up sort of in that time frame, and then come up again more recently, maybe -- coming up again maybe in 2017, 2018, somewhere in that time frame.
 - Q. But in the last four years roughly?
 - A. Yes.

- Q. Do you recall why they wanted to investigate an alternative election system? By "they" I mean SBISD.
- A. I don't -- I don't think I was given a lot of direct information about sort of what the thinking was, but my impression was -- or at least I approached it as probably a combination of motivations maybe, different motivations possibly by different -- either by different board members or different people involved. But -- so my sense is they were -- that they were both looking at that as something the district might just want to do, and also looking at it as something the district might do in a -- in a sort of a prophylactic way; that is, to avoid being -- to avoid being sued.

So at the -- in the very earliest instance where it was clear that you couldn't draw a Gingles 1 district, I mean, one of the things that -- that I

indicated at the time was that while they couldn't draw a Gingles 1 district at that point, which I think may have been around 2000, that it was clear that the population trends, given the direction of population trends, the day was going to come when they could draw -- when they could draw a single -- when you could draw a Gingles 1 district, and that in my experience any district that could draw a Gingles 1 district should be thinking seriously about what they intended to do about it because it's -- it's not that hard to get -- it's not that hard to win a Voting Rights Act Section 2 case if you can't draw a single-member district. There's really only one thing where you're not at the mercy of sort of interpretation or the court's feelings, or whatever, and that is the bright line, like -- I mean, even if they just go under it by, you know, a tenth of a percentage point, apparently like the one person, one vote standard for congressional districts, that -- apparently the court means, literally means one person, one vote.

Q. Yeah.

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A. The bright-line test literally means the bright-line test. And nothing after that, as I always tell districts when I talk to them, nothing after that is a bright line, nothing after that you can be assured, you can say "okay, given this set of facts we're

definitely going to win this case or we're going to" -"you know, we could get this" -- "we could get the
summary judgment or something." Once you get into not
only the other thresholds but the totality of the
circumstance then you -- it's not only does that mean
that you're actually going to probably end up in a full
trial as opposed to getting summary judgment on Gingles
1. That's going to be expensive and it's -- and it's
going to be uncertain and it involves a lot of political
considerations that I think are important for a board to
be -- to be thinking about in advance.

It's not something you want to take lightly. So that was sort of where things were left, or initially was that this was -- that that point was going to come, and when that point -- when they reached the point where they were no longer sort of protected by the fact that a district couldn't be drawn that they were -- they needed to be thinking about what they wanted to do at that point so --

- Q. Do you remember the names of the demographers involved?
 - A. I do not.

- Q. Do you recall if they did a racially polarized voting analysis, if anybody did?
 - A. I -- I'm -- I wasn't sort of privy to all of

whatever their discussions were. I'm not sure I was ever in -- either in direct contact with any of the demographers or present when they were discussing things with the lawyers, so I -- if they did, I wasn't aware of it, but I don't know whether they did or not.

Q. Did you do a racially polarized voting analysis?

A. At that point there was a -- I did just a very preliminary, not -- sort of -- maybe not an actual racially polarized voting analysis, but a quick look at -- just looking at sort of where -- where candidate votes were centered across the rough -- you can only do it across the rough geography because there's so few polling places. But just looking at where vote totals were centered and how they varied across the geography, but not a formal -- not like a EI formal analysis. At that point it was just to look at the -- at sort of what the election results looked like across the rough geography.

Q. What was your informal conclusion? Do you recall?

A. My informal conclusion was that that rough look was certainly consistent with the possibility that -- both that Hispanic voters were voting at above 50 percent for preferred candidates, including Hispanic

candidates, and that Anglo voters are voting below 50 percent for those candidates, and those candidates weren't being elected to the board.

- Q. Fair enough. And I think I -- in your answer I heard you say you had not done one yet. Have you done a racially polarized voting analysis?
 - A. Since?

- Q. Since.
- A. Yes.
- Q. And not for this case, but for --
- A. Right. Not for this case, but -- but more recently than the -- so there -- there are sort of three distinct eras here, the old --
 - Q. Sure.
- A. -- the dinosaur era, which was about meeting Gingles 1 with Bob Heath, the more recent stuff three, four years ago looking at -- particularly focusing on potential things the district might want to think about. That was, again, this rough kind of look. And in addition a more direct focus on cumulative voting on systems with some at-large, you know, some single-member. And then more recently I was asked by -- we're now at the -- at the second set of attorneys rather than the third -- at the second set of attorneys asked to provide the attorneys with, you know, a more

complete analysis of the sort that you typically will see in a case like this.

- Q. Did you do ecological inference?
- A. Yes.

- Q. Gary King's?
- A. Well -- oh, God. It's -- it is essentially
 Gary King's, but not Gary King's original, and
 particularly not his iterative, which I for some reason
 find myself fighting about all over the country. People
 still insist on using King's iterative, which King only
 just mentioned in passing, and then immediately, you
 know, replaced with a -- so, yes, the -- what I
 typically use is the variant of King's EI that's
 sometimes called the Bayesian or I -- I think it more
 appropriately is R x C approach. But it's essentially
 King's EI.

Q. I understand. And did you do the numbers yourself?

A. I think -- so there were two -- two pieces to that. There was a standard, just an OLS, which I often do just as a first estimate. It's not as -- it doesn't do as good a job. It doesn't give you statistical significance, but it usually gives you a pretty good quick picture, which I did. And then the actual EI would have been run by Randy Stevenson, who's a

professor at Rice, who does a lot of programming and statistical work with me.

- Q. And this was before the filing of this suit, correct?
- A. I believe so, although I'm not -- I'm not exactly certain when the suit was filed or exactly when --
 - Q. Yes, sir.

- A. -- when the work was done. But I -- yeah, I would say -- I think it was before the suit was filed, but it could have been -- no, no, no, because there was discussion -- I think the district was aware that they could be sued so -- what I'm not sure about is the -- I had been asked to sort of take a look, so I had done that very informal look. And I had been asked by the lawyers to take a look at that, and at that stage I think probably was when I ran the sort of regression analysis. Whether that -- whether the actual EI analysis was done before or shortly after the lawsuit was filed I don't -- I don't know.
 - Q. Do you recall the conclusions of that report?
 - A. I did not provide a report.
- Q. Did you recall -- do you recall the findings from your analysis?
 - A. So the findings I shared with the attorneys

1 from that analysis. 2 MR. CRAWFORD: And so based on that answer 3 I'll ask you not to disclose what you told the attorneys 4 based on the attorney-client privilege. 5 0. (BY MR. GOLANDO) Is Lisa Turner your attorney, 6 sir? 7 Α. Lisa --8 I'm sorry. What was the previous attorney's 0. 9 name? 10 MR. CRAWFORD: Lisa McBride. 11 I'm sorry. I apologize. MR. GOLANDO: 12 MR. CRAWFORD: No problem. 13 (BY MR. GOLANDO) Is Lisa McBride your Q. 14 attorney? 15 Α. My attorney? No, she doesn't represent me. 16 Q. All right. 17 But that's who I was working for when she 18 represented the school board. 19 Yeah, I understand. And when she contacted you 20 to do the EI analysis I heard you to say that it's 21 possible it happened before the institute of this 22 lawsuit. Correct? 23 Α. That's possible, yes. 24 Q. Okay. 25 MR. GOLANDO: I think we need to -- I need

1 to talk to Barry real quick, if you don't mind. 2 MR. CRAWFORD: Okay. 3 MR. GOLANDO: We're going to take a -- just 4 a two-minute break. 5 MR. CRAWFORD: Sure. 6 MR. GOLANDO: Two or three-minute break. 7 (Off the record from 10:54 a.m. 8 to 10:55 a.m.) 9 (BY MR. GOLANDO) As I understand it, I asked 0. 10 you what the contents of that previous analysis was, and 11 you -- Mr. Crawford objected on the basis of 12 attorney-client privilege, is that correct, and you're 13 currently refusing to answer that question? Correct? 14 I'm deferring to whatever -- whatever Charles 15 tells me to do that's what I'll do. 16 Q. I don't think there's a basis to object to that 17 because I need to know your previous analyses for 18 credibility and weight. You've been hired on this 19 position and --20 MR. GOLANDO: What I'd like to do instead 21 is to see if we can put this answer under seal, and we 22 can go fight about it with the --23 MR. CRAWFORD: No, I'm not willing to waive 2.4 it. So what we can do is we can note it in the record, 25 and then after the deposition we can take it up with the

1 And if we need to re-present Dr. Alford we will, 2 but I'm not comfortable even under seal waiving the --3 waiving the objection. 4 MR. GOLANDO: I understand. I think that's 5 reasonable. Fair enough. So let's just move on. 6 0. (BY MR. GOLANDO) So the OLS that you did was 7 definitely before the lawsuit, correct, the ordinary 8 least squares? 9 Α. Could you remind me when the lawsuit was filed? 10 That might be --11 MS. SHAKRA: June -- June --12 MR. GOLANDO: June of last year. 13 MS. SHAKRA: 2021. Probably like June --14 MR. GOLANDO: The 30th? 15 MS. SHAKRA: No. It was before the 26th. 16 I want to say it was maybe like the 12th. MR. ABRAMS: I'll be able to tell you in a 17 18 minute. Just give me a second. 19 THE WITNESS: I feel better for not 20 I felt kind of stupid, like I didn't know when 2.1 the lawsuit was filed. So this is nice. I feel better. 22 Okay. Let's see. MS. SHAKRA: 23 MR. ABRAMS: The amended complaint was filed on June 22nd, so the original complaint would have 2.4 25 been filed several days before.

1 (BY MR. GOLANDO) So mid June. 0. 2 I was -- I thought it was in the fall, so Α. 3 that's earlier. So I don't -- I don't know. I mean, I 4 could -- I could figure that out, but I just don't --5 that's -- I didn't realize the lawsuit was filed quite 6 that early, so I don't -- I may have done that -- I 7 think I probably did it sometime in the summer, but I 8 think it might have been more like August rather than --9 than in -- sort of in the -- in May. I'm just not sure. 10 I understand. 0. 11 But I can find out. Α. 12 If it was in May, then do you recall the Q. 13 outcome or what the ordinary least squares regression 14 showed? 15 MR. CRAWFORD: Again, I'm going to object 16 to that based on the attorney-client and work product 17 privileges and doctrine. And, Martin, just to your 18 point, I believe that even if the lawsuit had not been 19 filed at that time it was in -- at least in anticipation 20 of litigation, and the privilege would also apply. 21 MR. GOLANDO: Okay. 22 MR. CRAWFORD: And the doctrine. 23 MR. GOLANDO: We'll see about that. 2.4 MR. CRAWFORD: Sure. 25 0. (BY MR. GOLANDO) I'm going to hand you Exhibit 1 again, please. I want you to look at the last number three of the subpoena. Do you see that, sir?

A. Yes.

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- Q. Okay. What does that say? Could you repeat it for the court?
- A. It says "All reports that the witness has prepared for the Spring Branch Independent School District or its counsel, on any subject for which he has been compensated."
- Q. Would you agree with me that those analyses that you provided Ms. McBride would have been captured by that -- that request?
- A. I guess I didn't -- so two issues for me. One is I wasn't certain about what of that would be -- sort of normally would be disclosable or not, so I -- you know, I checked with Charles. And, also, I never provided a report to the district or the counsel. I provided, you know, information and some tables, but I -- I didn't -- it never reached the point of my actually providing an expert report. So I guess I wasn't -- I wasn't sure about exactly whether this entailed sort of everything I ever told the lawyers. And then I also wasn't sure about what of that was -- what was protected and not, so I'm relying on the attorneys --

Q. I understand.

A. -- on that.

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- Q. Did you provide Mr. Crawford or anybody else at that firm the documents we've just been talking about, the OLS, or the EI that you did, and it sounds like in the summer of 2021?
- A. Anything that had actually -- that I had shared with the previous attorneys that I still had I would have provided to Mr. Crawford.
 - Q. Okay.
- A. I'm not sure that there was any -- I'm not sure that the OLS analysis was ever even -- anything done other than just sort of looking at that real quickly in Excel. I'm not sure that was ever reduced to anything that -- that would have been transmissible either to attorneys or to Mr. Crawford. But certainly anything else that would fall in that category was provided to him.
 - Q. Do you still have the OLS Excel file?
- A. It's -- I guess it's possible. I haven't gone back to look for it because I think, you know, it's superseded by the EI analysis. But it's possible that it's -- I could look. It's possible I guess.
- Q. Without telling me the contents, was the OLS consistent with the EI?

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Not inconsistent. I guess -- so, I mean, I -you know, I think -- my recollection is that I wasn't satisfied that I sort of understood fully what was going on on the basis of that analysis. So one of the things that can be problematic with -- well, in lots of things that can be problematic with OLS -- but it just was not -- it -- it had, you know, sort of large confidence intervals, and my recollection is there were some things internally that didn't look like they -- they were consistent across some of the elections, whatever, that -- that led me to think that -- I mean, one of the things that obviously is important here, as true with any case where you're dealing with Hispanic voters, is turnout is really critical to understanding what you're actually seeing. And turnout doesn't get captured in the OLS, and so it's -- well, normally -- when I say "normally," so in a case where you have either the surnames of the voters, or a case involving black voters where black VAP is solid as a rock, it really doesn't make -- you can do the analysis either way. It's going to be about the same. The advantage for -- for using -- in my view for using R x C EI with -- if the case is a Hispanic case and if you're relying on something other than the vote codes -- so a lot of time you're relying

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on CVAP for example, and CVAP doesn't account for turnout. So R x C builds turnout estimation into the estimation of the vote parameters, and that can -- in that instance it can produce quite different results than what you would get where -- where in the exact same analysis for black voters there would be virtually no substantive difference. So I'm never very surprised if -- if the quality of data is low, which for -- that means anything other than surnames for Hispanic voters, it's just hard to say for sure if you're going to get a clean -- a clean result out of the -- out of the OLS.

- Q. I think I understand. But if you used voters for your OLS and you used the -- either the -- an icon Bayesian database that would solve that problem, correct?
- A. Yeah. I would expect you'd get a much -- you'd get a much less problematic OLS result. I don't have -- I haven't sort of stress-tested this on this particular set of data, and I could be wrong about where the -- where the noise in the OLS was coming from, but my suspicion at the time was that it was coming from -- from the lack of turnout information.
- Q. Fair enough. I don't have any more questions about that.

Are there any other reports that you've

done for SBISD that you haven't disclosed to us?

- A. That's -- I mean, I think we've covered all of what I recall of information, types of information that I've shared with -- with the attorneys, or the attorneys shared with the board, or that I was present to discuss with the board.
- Q. And as we're sitting here today you have not provided the plaintiff with that data for the OLS or the data for the EI, correct?
 - A. Correct.

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Q. Thank you, sir. So let's just go a little bit more into your history, if you don't mind.

How many times -- how many times have you been an expert in a case involving Section 2 of the Voting Rights Act?

- A. It would be 40 or 50 times.
- Q. Yeah. A bunch. Have you ever been an expert for an individual voter challenging an election statute?
- A. I don't know. Individual voter challenging an election statute?
 - Q. As opposed to working for the entity.
- A. So mostly by happenstance, or whatever, I mostly work for entities, I think probably because I started doing this locally mostly in -- in the area of drawing districts for entities, and then ended up moving

- 1 into sort of the Section 2 issues beyond drawing the 2 districts. So I mostly worked for entities, but I 3 have -- I mean, I worked on cases where -- where 4 representatives were challenging district plans, but I 5 don't know -- I mean, I don't think they were 6 challenging them as individual voters. I think their 7 challenge was -- I could be wrong. I don't know why 8 they were -- what their actual standing was. 9 Do you remember the representatives? Do you 10 mean state representatives, or do you mean other 11 governmental officials, incumbents? 12 Α. Well, I worked for a group of Democratic 13 representatives I think organized by Martin Frost --14 Okay. 0. 15 -- challenging a congressional plan. I worked 16 for the Democratic Party in Florida, a challenge 17 related to I think the congressional districts in 18 Florida. 19 And do you have a time period for that, please? Q. 20 The '90s? 21 The '90s I think. Α. 22
 - Q. And the Frost would have been in the '90s, too?

 That was the Bush v. Vera case, right?
 - A. No.
 - Q. Okay.

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A. I think Frost would have been -- I think Frost was the redistricting.

- Q. Right, right, right. That was the 1997 -- '95, '97 reset. I'm sorry.
- A. No. This was the two thousand -- this is when --
 - Q. Oh. This is the mid-decade --

A. Yeah. So this is when I worked -- so I worked for the legislative redistricting board because the state didn't -- didn't draw lines right. So the redistricting board drew the lines, but they couldn't draw the congressional lines. So the court drew the congressional lines. So that's my congressional plan. The court actually asked me to give them advice about how they should go about that, "what would you do, what would a neutral plan look like?" So I gave them some advice, and they acknowledged in the decision where they released the plan that they had appreciated my input, or whatever.

So I told everybody, I was like, "This is a dream for somebody who studies Congress. I actually had a hand in a congressional plan." And they held exactly one election under it, and then the state -- the state just like gutted it like a fish. And so -- and so then this is where the Frost and the other congressional

intervenors, they filed suit. They wanted to -- you know, they wanted to -- basically the point of their suit was that the state couldn't engage in a mid-redistricting, or mid-season redistrict, whatever, that it was already an official plan.

- Q. So you drew the plan in Balderas. That's the 2000 case. And then you were an expert for the intervenors in the 2003 case?
 - A. Yes. I didn't draw the plan, but I --
 - Q. Advised?

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A. -- provided some guidelines in what I thought was appropriate for the court to use, and then testified on behalf of that plan, when the -- when the state replaced the plan and then there was a suit over whether the -- whether that mid-decade redistricting was appropriate or not. So that was with the -- it was a Democratic congressman who intervened. I don't remember exactly who all was in that, but -- but I remember the lawyer for the state, the first question when I was put on the stand was, you know, "Why did you switch sides?" And I said, "I didn't switch sides. You did. This is the" -- "this is the exact plan, you know, that I" -- "when I was working for you that we helped the court to" -- because the Attorney General's Office was involved as well in trying to provide a neutral plan

that the court could use. And so --

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- Q. And that lawyer was Andy Taylor?
- A. I think it was Andy at that point. Yeah. Yeah. That would have been back in Andy's day.
- Q. So it sounds like those were drawing districts.

 Did you ever do racially polarized voting --
- A. No, I was not -- sorry. I was not drawing districts in the -- when I was working for the congressional intervenors because they were just defending the court drawn district against the -- the district the state had drawn to replace it. But I don't remember the entire scope of what -- what I was actually looking at relative to the -- to the new draw as opposed to the court draw.

Q. Fair enough.

- A. And I think in -- if I'm remembering the Florida case right, it did -- it was a -- it was voting rights issues related to the treatment of Hispanic voters in Florida. And I think it was also a congressional plan, specifically sort of how voters in southeast versus southwest Florida were treated in terms of drawing Hispanic districts.
- Q. What's the scope of your engagement in your contract, if you don't mind me asking?
 - A. At least my understanding of it -- you know, I

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probably pay less attention to these contracts than I should.

- Q. If you want to refresh your recollection --
- A. I just say what I -- what I agreed to before this was drawn up, and this looked to me like it didn't exceed that, was that I would provide a report that was essentially responsive to Dr. Stein's report, so that that was the extent of my involvement, was to provide response and commentary to his report as opposed to analysis itself. It was -- my role was to -- basically to provide a critique and context for Dr. Stein's report.
- Q. And so you have been hired in the past by SBISD to determine whether or not elections are racially polarized in SBISD elections, correct?
- A. That was certainly one of the tasks I was asked to perform previously, yes.
- Q. Given your time as an election law expert, racially polarized voting expert, and your association with SBISD since I guess the early 2000s, do you believe that elections in SBISD are racially polarized?
- A. I try pretty hard not to reach legal conclusions in my work as an expert partly because I'm not a lawyer, and it always pisses me off when lawyers reach expert conclusions. And so there's sort of a turf

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But I think also it's -- in my experience, and I don't think I'm alone in this, you know, the courts have not -- this is not an area broadly in which the courts have distinguished themselves in making clear what it is they want entities to do or plaintiffs to do or lawyers So, I mean, I have my own sort of view of kind to do. of how this -- how this makes sense. But I recognize that the term is used in a variety of ways. It's used to indicate, by some people, to indicate -- for example, many plaintiffs' experts believe that the definition of racially polarized voting is if 50 percent plus one of the minority voters vote for candidate A and 50 percent plus one of nonminority voters vote for candidate B then that's racially polarized voting, and that's -- I don't think that's true in the -- in itself I don't think that's true in the legal sense, and I don't actually think it's even an appropriate label for what's going on there. But, you know, that's an old dispute going all the way back to Brennan about -- in which I think Brennan captured exactly the issue there, is -- you know, I think -- I'm not sure everybody never says it, but I think in the current debate what Brennan would

like is for people to come up with a name for that that

isn't racially polarized voting in the sense that, you

know, the public understanding of that is -- is that voting is polarized by race, meaning by some sentiment or concerns of the race of voters or the race of candidates, as opposed to just these two groups maybe voting differently for the same reason lots of other groups might vote differently.

- Q. I think I -- I understand that.
- A. Yeah. I'm just not -- I'm not sure if you're -- what is -- what is it you're asking me? Have I reached a conclusion, a legal --
 - Q. No.

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- A. In a legal sense, no.
- Q. I'm asking you as an expert are Latinos politically cohesive in SBISD elections?

MR. CRAWFORD: I'm going to object to the extent that it's outside the scope of this engagement.

And I'll let Dr. Alford make that determination but --

- Q. (BY MR. GOLANDO) You can still answer, sir.
- A. I'd say, you know, based on -- I mean, for example, based on the -- on Dr. Stein's report I'd say there's evidence of modest cohesion among Latino voters. So there's certainly no evidence of the sort we would see in the black voters. I don't think Hispanic voters are voting 90 percent one direction or another. But there's certainly evidence that suggests that at least

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in some of the elections more than -- more than a bare majority of Hispanic voters are favoring Hispanic candidates.

- Q. Based on your experience as a election observer and an analyst for SBISD in the last 20 years of your employment here, or engagement here, do you believe in your expert opinion that Latinos are politically cohesive outside of the Stein report?
 - A. I would say modestly to moderately cohesive.
- Q. Do you believe that, same question, as to Anglos? Are they politically cohesive in SBISD elections?
- MR. CRAWFORD: Same objection as before to the extent it exceeds the scope of his engagement.

MR. GOLANDO: Yes, sir.

A. I think it's harder to say they are, but I think -- on balance I'd say moderately co -- modestly -- again, sort of modestly to moderately cohesive. So in -- again, in the sense of the sort of Gingles 2 and Gingles 3 threshold, not in sort of the broader totality of the circumstances. But just addressing it as, you know, what -- what my guess would be about Gingles 2 or my guess about where you would be on Gingles 3 that's -- that's what I would guess. And I think that's roughly what Dr. Stein's analysis suggests.

1 (BY MR. GOLANDO) Would you based on your Q. 2 experience as an expert and a observer of SBISD 3 elections in your 20 years here and your prior 4 engagement do Latinos support different candidates than 5 Anglos in SBISD elections? 6 Sometimes. Α. 7 Q. How often? 8 I don't know how often, but it certainly Α. 9 happens. 10 Can you recall a time when they didn't based on 11 your analyses and your expertise? 12 I don't know. I mean, I can't think of a Α. 13 specific -- a specific example, but I -- but I'm not at 14 all sure that that is -- that it's generally the case 15 across elections that -- in fact, I suspect it's not. 16 My guess is that there are elections in which both 17 Anglos and Hispanics are supporting the same candidates, 18 but I don't -- again, I -- I don't know for certain, but 19 that's my guess. 20 Okay. I understand. We're going to talk a 21 little bit about Bob Stein now. Do you know Professor 22 Stein? 23 I do. Α. 2.4 0. How do you know him, sir?

He hired me to come to Rice. He had been at

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University of Georgia before I came to University of Georgia. We didn't actually overlap, but I had had conversations with him. At that point prior to -- to actually working with him I had met him at a convention. And he's the one who at that time was the -- I can't remember if he was the -- I think -- yeah. He was the department head at that time. Georgia actually tried to hire me twice. And the first time -- my former mentor from U of H, David -- Dr. David Brady was the chair, and he had contacted me and tried to work out a deal to get me to come to Rice. And I really wasn't -- I hadn't been at Georgia very long, and I wasn't ready to go. So I ended up turning it down, and he was very unhappy about that. And then a year later circumstances had changed. I was in the middle of a divorce.

Q. I'm sorry.

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A. I was not very happy with my colleagues at the University of George. And by then Dr. Stein was the chair. And so he called up and said, you know, "We would like you to come to Rice." And I said, you know, "I'm not a very good negotiator, so whatever you offer me I'm going to take it." And he said, "I'm not a good negotiator either because whatever you want we'll give it to you." And so we then worked out something that sort of fell within those -- within that range, and I

1 was hired. And David Brady never forgave me for 2 allowing Stein to outhire him on the recruiting front. 3 So -- but I've known him since I -- I knew him before I 4 came to Rice, but certainly since I came to Rice, and 5 we're -- we've always been close colleagues. 6 close personal friends. Our families are friends. 7 was just having dinner with my daughter in Washington, 8 D.C. over the weekend. 9 Oh. 0. Wow. 10 So we remain very close. 11 Do you know his reputation as a scholar? Q. 12 Α. Yes. 13 What is his reputation as a scholar? 0. 14 It's a excellent rep -- he's very prolific. 15 He's very well-respected. He's moved around across a 16 variety of areas in his career and always had -- the 17 areas he's worked in has always ended up being important 18 work, widely recognized work, so --19 How would you personally rate him as a scholar, 20

- Professor Stein?
- On a -- what are we doing here? A scale of one to ten or --
 - Is he an expert in his studies? Q.
 - Α. Yes.

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Okay. Is he -- is he at the top levels of his 0.

scholarly research?

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A. I would say in the areas that he works in he always ends up producing work that is among the best of the work that's done in that area. So I would say that both -- when he was doing things like the distribution of federal funds, pork barrel, his more recent work on things like ballot form and access, that sort of stuff, again very -- he does very good, very high quality work.

Q. Would you call him an expert in social science statistical research?

That's a time-bound question. So when I came Α. out of graduate school Stein and I both would have been experts in statistical social science research. We were like go-to people. We were, you know, the young Turks and, you know, drove all our old professors crazy by, you know, asserting they had no clue what they were doing and we did. But those things change over time. So, you know, he's a -- he's a extremely competent data analyst and is I -- I would say among people who are not actually political methodologists he's -- is as skilled as anybody doing work in social sciences today. he's -- political science didn't really have methodologists when he and I came out of graduate school. And now we have -- we have people in our department who we hire as methodologists. They only

1 teach methods. They only research methods. We're not 2 in that category. Neither of us are methodologists in 3 that sense. We're not going to develop the next --4 we're not Gary King --5 0. Right. -- which is -- I guess you could say for pretty 6 7 much everybody in the United States. But he 8 certainly -- he employees up-to-date methods, and he 9 does them accurately and skillfully for the -- for his 10 research question. But he's more interested in 11 answering a research question than he is in developing a 12 methodology. 13 I don't blame him. Do you agree that Bob 14 Stein's expert opinion is relevant to the task at hand? 15 Α. Yes. 16 Q. Okay. Would you agree that racially polarized 17 voting analyses using ecological regression rest on 18 scientifically reliable foundations generally? 19 Α. Yes. 20 Would you call Bob Stein an expert or a top 21

- scholar in analyzing voter behavior?
 - Α. Yes.

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- Are you familiar with the use of ordinary least squares?
 - Α. Oh, yes.

1 Yeah. Me too. Q. 2 My -- the professor who taught me methods at 3 university of Iowa said, "By the end of this course 4 you'll not only recognize that OLS is the superior 5 research method, you'll also recognize that it's a way 6 of life and will be the only thing you dream about." 7 And I thought that was an exaggeration, but I 8 honestly -- it is an approach to life. You know, life 9 is about trying to understand the world around you. 10 to this day when I'm -- when something puzzles me, like 11 the behavior of one of my daughters for example, I 12 actually like find myself unable to not think of it as 13 an OLS equation. So, yes, I -- I worship at the alter 14 of ordinary least squares regression. 15 Me too. I do. And I remember my scopes and 16 methods class. I know exactly how you feel. 17 So is ordinary least squares a 18 scientifically verifiable way to evaluate racially 19 polarized voting? 20 Α. Yes. 21 Is OLS a technique generally accepted in 0. Okay. 22 the social scientific community? 23 Α. Yes.

Has OLS analysis been subjected to peer review

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and publication?

A. Yes.

- Q. Okay. Can OLS be tested and verified?
- A. Yes.

- Q. Does OLS have a known error rate?
- A. It -- assuming you meet the assumptions of OLS it is -- what's called a BLUE method is the best linear unbiased estimator. So -- but that means you have to meet the -- the basic assumption. So, yes, it's -- there is a way to test the accuracy. OLS provides measures of the stability and usability of its results. But like any technique they do depend on meeting the assumptions.
- Q. Do you believe that Dr. Stein is an expert qualified by knowledge, skill, experience, training, and education?
 - A. Yes.
- Q. Do you believe that Dr. Stein's opinion is based on sufficient data?
- A. So we're getting into the crux of things here. I think the -- I think the data he has is probably enough to answer the question. I don't think it's necessarily the best data he could have. But I don't think the -- and I don't -- I don't disagree with the results of the analysis he did as it is, but I don't think -- I don't think it's sufficient to answer at

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least some of the questions that routinely have to be answered in my view in a full racially polarized voting analysis.

- Q. I want to be very clear. We'll get to see your problems with the Stein report in a moment. I promise you. But does the data he used, is it sufficient to determine the outcome?
 - A. I think the -- yes, I think so.
- Q. Do you believe that Dr. Stein's opinion is the product of reliable principles and methods?
- Again, I don't want to over endorse or under Α. There's -- yeah, I think he's running OLS correctly. I don't doubt that those are the right parameters coming out of OLS. I -- I just think it's not -- the data has been aggregated in a way that I think is -- I have questions about the way the data has been aggregated. I have questions about the quality of the input data on the demographic side, the BISG result, and I have questions about at least some of the ways in which election result data was treated. So I don't exactly -- it's not the data itself that's problematic, but the way -- you can't divorce that from the way it's been aggregated for input into the -- into estimation. And I think that's where -- where we have disagreements.
 - Q. I think that's a reasonable thing to say. Do

1 you believe that Dr. Stein has applied the principles 2 and methods reliably to the facts of the case? You may 3 disagree. But has he done so reliably? 4 So it's interesting how certain things come 5 back routinely in depositions. So within the narrow 6 meaning, the narrow statistical meaning of reliability, 7 yes. 8 Perfect answer. I appreciate it. All right. 9 Let's talk about racially polarized voting generally, 10 and then I promise you we'll get to your words. 11 promise. I just want to make sure --12 It's fine with me if we don't. Α. 13 Because I think primaries are important. ο. 14 again, if I ask you a question that doesn't make sense 15 it's not your fault. It's my fault. Okay? 16 If 90 percent of Latino voters voted for 17 one candidate, are they politically cohesive together in 18 a given jurisdiction? 19 Α. Yes. 20 Okay. If 80 percent of Latino voters voted for 21 one candidate, are they politically cohesive together? 22 Α. Yes. 23 Okay. If 70 percent of Latino voters voted for Q. 24 one candidate, are they politically cohesive together?

I don't know. I mean, that's where I would

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start -- because, again, "cohesive" is a -- is not a binary term. Cohesive is a -- is a term that's being applied to what is, in fact, a continuous measure from zero cohesion to perfect cohesion. And so if a measure goes from no cohesion to perfect cohesion there's always a question of "what do people mean by cohesion?" And I know some people mean by cohesion anything other than zero, which means actually by definition in virtually every election in the United States every group is cohesive. I take that to be a nonsensical -- I know that I'm in the minority here of my -- at least some of the experts. But I take that to be nonsensical with regard to providing that information to the court because -- because the court has said that Gingles 2 is a threshold test. And if the threshold is by definition always met then it doesn't belong in the Gingles -- it's not a threshold at all. It's not even a test. There's no reason -- there's no reason to even have it there. So, you know, we can go down that slippery And you know, we can start at 50 percent, which is zero cohesion. We can start at 100 percent, which is perfect cohesion. And then the question is sort of where does -- where does cohesion fall on that scale. And I don't believe it's the entire scale. So one way of thinking about that is this -- this actually isn't a

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scale from 50 to 100, of course, because 50 would suggest half cohesion, and it's zero. So turn it into what it really is, is zero to 100 scale. And in that zero to 100 scale 75 is actually at 50 percent cohesion. It's half of the values are less cohesive. Half would be more cohesive. So that's a kind of midrange of cohesion, and so that's sort of roughly -- in my view roughly you clearly have cohesive behavior at sort of 80 -- 75, 80, 90 percent. But the question of what you have at -- once you get to something like 70 or 60 or 51, I mean, I just think you're -- again, the court has provided exactly zero quidance here. So I just try to be careful in the use of the language. So I think at 70 you're starting into a -- you're getting into a range where you might say there's -- we talked earlier on things like modest or moderate cohesion. So there's some moderate level of cohesion there. And I think that's -- sort of in that 60 to 70 percent range is what I think of as moderate or modest cohesion. Below 65, certainly below 60, I don't really think that's -- if that's cohesion, then, again, it doesn't -- in a Gingles 2 sense then cohesion doesn't matter because cohesion is always greater than 50 so --

Q. So just to be clear, so from 60 to 70 it's moderate cohesion? Sixty to 75. I don't want to

misstate --

- A. Yeah. Well, yeah, I mean, it's -- in that sort of middle range I think the -- the question, again, it's very -- it's not hard to see. So I don't think many people would dispute that 80 to 100 is cohesion. And in that sense if you were going to make it symmetric then 50 to 70 would be noncohesion. Right? So if the upper 20 percent is clearly cohesion then the lowest possible 20 percent, if you're going to have a scale that balances in a -- you know, in a kind of a normal sort of scale sense, then you could describe everything below 70 as not cohesive and -- and sort of, you know, kind of -- then you'd have kind of a middle range in there somewhere.
- Q. If 70 percent of the Latino community supports a candidate, that means that 30 percent didn't, correct?
 - A. Correct.
 - Q. So two-to-one?
- A. Yep.
- Q. More than two-to-one really, right?
 - A. (Moving head up and down.)
 - Q. And that's still not cohesive enough from your perspective?
- A. It's -- again, it's -- I don't know what you mean by "cohesive enough." But I don't think it's

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helpful given the nature not only of what the court is -- so there are two questions here I think. one is is it cohesive enough to clear the threshold And that's -- then there's another question because, of course, racially polarized voting enters twice, one is in its mechanical Gingles 2 and 3, and then again in the totality of the circumstances. And while I don't think those should be -- given their proximity to each other I think it's inefficient to have them mean different things. I'm aware that the -- from cases I've been involved in that currently there are a lot of judges who want to make those two very different things, the Gingles 2 and 3 racially polarized voter, and the totality of circumstances racially polarized voting. You know, whatever the judges want to do I'm fine with. I give them the information. They make sense out of it. But I think it's an awkward situation both in terms of analysis and in terms of the law to say that they're both -- we're going to call both of them racially polarized voting, but they're going to be defined in very different ways and very different implications. So I just think if the Gingles 2 test is -- are minority voters voting cohesively then that's

either going to need to be defined as in are they a

majority or not a majority. That's the dichotomy, and because it's a dichotomy it has a bright line. That's the great thing about dichotomies: "yes" or "no." If this is a "yes" or "no" question, then where is the -- where does the "no" become a "yes"?

Q. Fair enough.

A. And so I think -- my preference because I'm not making that legal decision, it's not up to me to say -- I'm always getting pressured, you know, "but you're the expert, so in your expert opinion is this legally" -- you know, "is this cohesive voting"? I just want to tell the court how cohesive the voting is from zero to 100. Right? And if you want -- you want to force me to put a term on it then in the middle I can put a term like "moderate" or whatever. And then if the judge thinks -- the number is still there. In your example the 70 is there. If a judge thinks that's what -- what the court means by cohesive voting, have at it. I'm glad I don't have to make that decision.

Q. Me too, for the record. And I want to be very clear. I'm not interested in your legal opinion. I mean, I am generally. You're a nice guy. You're a smart guy. But for the testimony I'm only interested in your expert opinion as a social science researcher. And I think I understood your question so -- or your answer

to my bad questions.

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I'm asking the same questions about Anglo voters because I wonder if there's a difference in your mind. If 90 percent of Anglo voters support one candidate, are they politically cohesive?

- A. Yes.
- Q. Eighty percent?
- A. Yes.
- Q. Seventy percent?

Α. I think you're getting -- again, now you're in a range where they're sort of what you might describe as modest or moderate cohesion. It's certainly in that -in that kind of range. And I think that's where -- if you think about sort of functional definition kind of thing, what's going on here, there it becomes clear the two things are interacting with each other. Right? that's what I think is both important to recognize, but also I think problematic in the sense that -- on the -on the Gingles 2 side there's just this question of minority cohesion. On the Gingles 3 side there's minorities voting or majorities voting cohesively so as to usually defeat. Well, so as to usually defeat the level then of what would be defined as majority cohesion is going to be on a sliding scale depending on minority cohesion.

And weirdly enough it's going to slide in the direction that the less cohesive minorities are the more likely it is that at the same levels of cohesion majorities are voting cohesively to defeat the preferred candidate. If the preferred candidate is only getting 51 percent of the vote, then a majority that's in fact splitting its vote almost perfectly evenly can still be sufficiently cohesive to defeat the candidate. is a weird scale in which as -- the further away we move from racially polarized voting the easier it is to find racially polarized voting in that sense because, again, these are -- in essence they are no longer -- they're no longer absolute -- again, a threshold test must mean that you can -- that you can in isolation answer that question. And judges in my experience frequently join two and three together to ask what they call the -- the Gingles 2 and 3 are the racially polarized voting Once you join them together they are not question. threshold. Two is not a threshold test if it doesn't stop the inquiry at two.

O. I understand.

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A. And so I don't have the solution to that issue, but it is problematic. And so that's why I think it's better to be imprecise in the language about -- about calling something cohesion or not cohesion. It's better

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to be imprecise about that and to just look at exactly how all that's operating and then think about what that means because ultimately, you know, Gingles 1, 2, and 3 is about determining if there's a solution in order to answer the question about whether there's a tort. And thinking about the solution is where you really do have to take it all into account because if cohesion is really low on the part of minorities then if -- if it's also the case that it's very difficult to get a district that's above majority, then the district is not going to be a district that's typically going to work. Right? It isn't going to solve the -- it isn't going to solve the problem. Fifty percent plus one voters lets you control the district as long as you're perfectly cohesive. Well, if your cohesion level is 52 percent, the district isn't going to do anything. Right? It's going to give you 25 percent of the vote. It's not going to win anything. It's not a solution to the problem. And, in fact, the problem is not the drawing of district lines. Right? The problem was very low cohesion. You know, splitting your vote doesn't let you control politics. And so that's -- that's my short answer.

Q. Fair enough. All right. Let's talk a little bit about racially polarized voting. We've talked a lot

about it already, but I want to make sure I get you on the record.

What do you believe racially polarized voting is, and how would you define it?

- A. So I would define racially polarized voting as, in the broadest sense, as a situation where -- where voting is being affected by racial considerations at a level that -- you know, given the -- the sort of numerical conditions and sort of things you assess in Gingles 1, that you have a situation where minorities are not able to elect minority candidates in a particular setting and would be able to in the -- whatever the legally available alternative settings are.
- Q. I think I understand that. So I'm going to ask you a couple of general questions about that, if you don't mind.
- If 90 percent of the Latinos support candidate A and 75 percent of the Anglos support candidate B in the same race, is that racially polarized voting, assuming your -- your first part of your definition?
- A. This is where -- I know you're going to be happy to hear this. But I don't think you can determine if voting is racially polarized in a single election.

 You can say the election is compat -- that's an election

that's compatible with -- with the existence of racially polarized voting, but I don't think it establishes racially polarized voting. And I don't think it's really -- you can given that -- if that's the fact pattern, I got one election in that fact pattern, I have no idea if voting in that jurisdiction is racially polarized or not. All I can tell you about is that one -- is that one election.

- Q. That one election is certainly racially polarized, correct?
 - A. The election?

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- Q. There's -- I'm sorry. I don't want to mischaracterize your testimony. I think you said there was -- it would be an example of racially polarized voting. Correct?
- A. So the election is compatible with racially polarized voting because I think it's important that when we -- when you characterize voting in an area that's racially polarized, you're -- you're characterizing the behavior of the voters over -- over a set of elections and over a type of election stimulus. And so I think it's -- it isn't a characteristic of the election. It's a characteristic of the voters. So I think that -- we don't know if that is an appropriate characterization of what the voters do in that -- in

that election. I mean, just for example, if that's a -you know, if that's a general partisan election between,
you know, two Hispanic candidates, one Democrat and one
Republican, I don't think that's racially polarized
voting.

Q. Right.

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- A. But it has -- the election has those features. So, again, it's -- it's not an election that would stand as obviously incompatible with racially polarized voting, but I -- in and of itself that doesn't tell you either that the election is racially polarized or that the voters are behaving in a fashion compatible with racially polarized voting.
- Q. So imagine that election, same thing happens five elections in a row. Is that racially polarized?
- A. Again, if -- if you're saying that that happens five times in a row -- and, again, I'd want to know what the -- you know, I want to know the race of the -- or ethnicity of the candidates.
- Q. Fair enough. So let's say Latino candidate A is Latino, Anglo candidate B is Anglo, these are nonpartisan elections, it happens five times in a row. Is that racially polarized voting?
- A. Assuming that the -- assuming that the -- that the Hispanic candidate -- that the Hispanic candidate,

who is also the Hispanic preferred candidate, is being defeated, in most of those elections then I think that's a sort of a -- a nice little set piece for what racially polarized voting looks like.

- Q. Same question, same assumptions, please. For 90 percent support of Latinos for the Latino candidate, and 65 percent support for Anglos, and this outcome is the same?
- A. Outcome is the same I think the -- yeah, the result is the same.
- Q. And that would be racially polarized voting, correct?
 - A. Yes.

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- Q. Fair enough. In your time as a litigation expert and a social scientist, do you agree that Hispanic surname candidates are the likely preferred candidate of choice for Latino voters? Likely.
- A. Well, I'd want to qualify it a little bit because --
 - Q. Sure.
- A. -- in my experience in modern U.S. elections that depends entirely on which party that candidate is running under.
 - Q. Let's assume --
 - A. Ted Cruz is not the choice of Latino voters in

Texas.

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Q. No.

A. But that's a different topic. And that's not just for Ted Cruz. Right? It's just -- there are lots of -- Texas has lots of Republican Hispanics, and when they run as Republicans they do not get the majority of the Hispanic vote. When they run as Democrats, they get the majority of the Hispanic vote. And when they run against Anglos as -- and when Hispanic Republicans run against Anglo Democrats the Anglo Democrats gets the majority of the vote. So in partisan elections it's not the case, no longer the case -- it may well have been the case in the past -- but it is no longer the case in the sort of current polarized atmosphere that the race of the candidate for either co-ethnics or for -- for nonethnic groups is -- is the determinative factor in voting behavior.

Q. How about in nonpartisan races, like the SBISD race?

A. I'd say in nonpartisan elections it's -- it's certainly variable depending on the -- you know, the area of the country and -- and some local factors. But there I think you're -- it's more often the case there that you would see Hispanic voters preferring Hispanic candidates.

1 In Texas and SBISD, correct? 0. 2 I think that's -- I think that's a fair Α. 3 statement. Yeah, I would -- that's what I would expect to see if I was coming in novel into some area. That 4 5 would -- it wouldn't necessarily be the case, but it's 6 what I would expect to be the case. 7 Q. And that's what you did see when you did your 8 OLS report and your EI report, correct? 9 I'm not a hundred percent sure. 10 Well, I don't want you to speculate. If you 0. 11 don't recall, you don't recall. 12 Α. Yeah. 13 All right. Let's talk about your great report. 0. 14 I'm going to hand you a copy of it. I think I've 15 labeled it as Exhibit No. 2. Could you review this and 16 make sure that it's authentic? 17 This looks like it. Α. 18 That's your expert report, correct? 0. 19 Α. Yes. 20 Okay. And we've labeled that Exhibit 2. 0. 21 preparation for your report, other than reviewing the 22 data provided by the plaintiff did you review anything 23 else? 2.4 Α. So I reviewed the data. I reviewed the --25 Dr. Stein's report itself. I looked at several of the

articles that he had cited. I looked at a couple of other things that I provided you here that are sort of things that came to my attention as a result of looking through the things in his report, one being this kind of a general statement from a group in California about the use of at-large elections and its effect on Latino representation, and the other being something from the Texas Republican Party about the -- essentially injecting -- deliberately injecting partisanship into nonpartisan elections.

- Q. That's the totality of what you -- all those documents form the basis of your report, correct?

 That's the totality?
- A. It's everything I recall. We get into specifics and I recall something else I'll -- I will let you know, but that's what I recall.
- Q. I appreciate it. In preparation for this report, did you do any -- did you review any survey data?
 - A. No, I don't think so.
- Q. Did you perform a survey about voter behavior in SBISD?
 - A. No.

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Q. Okay. For this report did you do an ecological regression analysis or EI or any kind of a OLS?

1 Α. No. 2 Okay. For this report did you analyze election Q. 3 returns in SBISD elections? 4 Α. No. 5 For this report did you review campaign finance 6 data? 7 Α. No. 8 Did you for this report -- did you analyze 9 incumbency advantage for this report? 10 Α. No. 11 For this report did you analyze any of the 12 issues that form the basis of the campaigns themselves? 13 By which I mean policy issues. 14 Α. No. 15 0. Did you analyze any partisan data for this 16 report? 17 Α. No. 18 Okay. Did you look at ballot drift and how 0. 19 that would have affected outcomes? 20 Α. No. 21 Did you look at ballot formation and how that 0. 22 would have affected outcomes? 23 Α. No. 2.4 Did you look at any kinds of early vote 25 patterns or precinct data associated with elections, for

SBISD elections, in formation of this report?

- A. Other than what's provided by Dr. Stein, no.
- Q. Okay. I have asked this before, but I want to make sure that I'm clear. In your -- in preparation for your report, did you perform any independent racially polarized voting analysis?
 - A. No.

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- Q. Okay. How long did it take you to review the data?
- A. I don't know. I have a -- I have a billing spreadsheet someplace. I could give you -- I could give you a very precise, down to a tenth of an hour, but I don't -- I don't recall offhand.
 - Q. Was it 10 hours?
- A. I -- I really have -- as you might, as you probably -- it's that time of year. I'm working on a dozen cases simultaneously so I don't --
 - O. Me too.
- A. Yeah. I -- at some point those -- you know, I'll hit, you know, some at the bottom of a spreadsheet, and I'll know how much time I spent. I saw a report -- I just looked at a -- some disclosure from another expert in Kansas. It was a guy I know at University of Michigan. And he was hired and provided a report for him two weeks later, along with a bill for \$63,000. I

1 thought I'm doing something wrong because I know he's --2 I know he's working for at least a dozen people because 3 I see his name all the time. And, my God, I -- you 4 know, whenever I hit "add" it never adds up to anything 5 like that in a two-week period. That's pretty -- that's 6 I know pretty astonishing. So I can tell you this. 7 when I saw that I was shocked, so I know it's less than 8 \$63,000 worth of my time. 9 How much of the report did you write? 0. 10 I wrote the entire report. 11 Mr. Crawford and none of the lawyers wrote the 0. 12 report for you? 13 Α. That's correct. 14 These are your words, these are your findings, 0. 15 correct? 16 Α. My words, my findings. 17 0. And you didn't use a data assistant to review 18 the data? 19 No, I did not. Α. 20 And you didn't use Mr. Stevenson? I'm not sure 21 if I'm getting the name correct. 22 Α. Stevenson. 23 Okay. It's Dr. Stevenson I suppose? 0. 24 Α. Yes. I did not -- Dr. Stevenson was not 25 involved.

1 This is 100 percent your work product? 0. 2 Α. Correct. 3 Yes, sir. What instructions were you given by 4 counsel in preparation of the report? 5 Α. You know, we discussed at the time we were 6 negotiating my employment, you know, what -- what I 7 could do for Mr. Crawford in this case, which was to, 8 you know, provide a commentary on Dr. Stein's report and 9 Dr. Stein's analysis. And that was -- that was the 10 extent of the discussion so --11 Q. And this is an obvious answer, but I need to 12 ask it anyway. You've reviewed Dr. Stein's report, 13 correct? 14 Α. Correct. 15 Okay. I've previously labeled this Expert 16 Exhibit No. 3. Could you review this, make sure that's 17 the report you reviewed? 18 Yes, that's the report I reviewed. Α. 19 Make sure that's handy in case you need to Q. 20 refer to it. 21 Α. Okay. 22 So just generally first before we get into your Q. 23 specific points, do you disagree with any of the data 24 that was used by Professor Stein in his expert opinion,

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the data itself?

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I don't have any reason to disagree with the election data, the results by election place. I -- I'm uncertain of what to make exactly of the BISG analysis. I'm not sure if I agree with it or don't agree with it. I may completely agree with it, and I may completely disagree, but I can't quite figure out -- there's sort of different forms of it that are being used there. It's not a hundred percent clear to me what the distinction is or how that's being utilized. in terms of the -- how that leads the -- the voting places to be, roughly to be arrayed, to the extent I can see that, it's -- it's not obviously backwards or anything like that. I'm not sure that it's a -- it's a very precise way of measuring the proportion of Hispanic voters at the polls, but it doesn't -- to the extent I can see that pattern in the scatter plots it's not -- I don't think it's -- in its rough direction it's not incorrect. So it's -- in that sense I think it's accurate enough for the kind of analysis he did to reach -- reasonably, reliably reach a kind of narrow conclusion about this kind of mass of elections.

- Q. I understand. And it's not inconsistent with the OLS that you ran and the EI that you ran, correct?
- A. It's not inconsistent. It's not inconsistent with my view of what you would likely see if you did

what he did. So I guess it's not inconsistent with -- I don't think it demonstrates in an appropriate manner that there is legally significant racially polarized voting in SBISD, but it's a finding that certainly is not incompatible with that.

- Q. And it's not incompatible with the EI that you ran or the OLS that you ran previously, correct?
- A. I didn't -- nothing in it surprised me. I'll say that.
- Q. I understand. Do you agree that Bob Stein's expert report and the methods he used demonstrate racially polarized voting just generally?
 - A. I don't know.
 - Q. Okay.

- A. Again, it's not inconsistent with that, but I don't know that it actually demonstrates that.
- Q. I'm not talking as a legal matter. I'm talking only as a social scientific matter.
 - A. I just don't know.
 - Q. Okay.
- A. It's really hard to say. It's a -- it's a very scattered set of data, and it's a very unusual set of data. It's just hard to say what it demonstrates. I'm really not -- it's not clear to me what it demonstrates.
 - Q. But you would agree that the slopes of the line

are inverted, correct? 1 2 Α. Yes. 3 And that those slopes are generally consistent 4 with racially polarized voting, correct? 5 They're in the correct direction. Α. 6 Q. Okay. What is a p-value? 7 A p-value typically is a -- it gives you a 8 probability. So it's, you know, a probability that some 9 value is, and in comparison to some null hypothesis, 10 that it's, you know, within some appropriate range of 11 that -- of that value. So, I mean, that's -- depending 12 on what statistic you're talking about it's a -- you 13 know, it's a probability. 14 Q. Would a layperson call that statistical 15 significance? 16 Α. They might. So p-value underlies what we call 17 statistical significance, which requires a null 18 hypothesis. It also underlies what you call a 19 confidence interval. Sometimes people are more familiar 20 with that. 21 0. Sure. 22 That doesn't require a null hypothesis. Α. That 23 just talks about, you know, plus or minus around a --24 Q. Yeah.

A. -- a predicted value.

- Q. Would you agree that Dr. Stein's report shows statistical significance, that his findings are statistically significant?
- A. He reports -- he reports a number that by social science standards would typically indicate statistical significance.
 - Q. A perfect answer. I appreciate that.
 - A. Okay.

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- Q. Okay. Do you agree with Professor Stein that his findings show that voting is racially polarized in SBISD elections? Do you agree?
 - A. No.
 - Q. Okay. Why don't you agree?
- A. I just don't think it's -- well, for several reasons. One is going back to the -- to the statistical significance. OLS is not a technique, nor is correlation that can generate an appropriate measure of statistical significance for ecological analysis.
 - Q. Okay.
- A. So that's a well-known -- that's going all the way back to its very origins. Bernie Grofman has written some articles about this. There just isn't an appropriate method for deducing that from OLS with -- with ecological data as opposed to with actual individual level data. So we just have to be -- we can

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report -- it's not that OLS doesn't produce that It's just that that estimate is not an actual estimate given the nature of the data. And so it's -you can't rely on it in the sense that if it's, you know, something significant to the 0.05 level, with -where that 0.05 estimate comes out of OLS it does not mean that you would expect that result -- you know, that you're in that 95 percent confidence interval or That's just not true. There are lots of studies that are looked at that said, you know, you can do this kind of analysis, and it shows that, you know, like 95 percent of the results are in fact nowhere near the confidence interval. It just doesn't -- it doesn't -- it's not mathematically correct, and it in practice doesn't work. So we -- that part we don't -we don't know about, so we can't tell whether -whatever the pattern is here we can't tell whether it's actually statistically significant or not. We're also mixing data from a lot of different elections, and within those elections a lot of different conditions. So at least the best I can understand it in some of these elections there is only one candidate and -- and we're mixing sort of a vote for the candidate with rolloff, or something, as a vote for the noncandidate. It's not the same thing as voting for another candidate. And then we're sort of over a span of time and over a series of candidates we're -- we're sort of putting all that together into one -- one giant OLS analysis. And -- and we're not actually looking at the cohesion for the preferred candidate or the voting against the preferred candidate by the majority. The candidate it's already been defined as the candidate with a Hispanic surname. And that's just -- that's just not the right way to do this.

Q. Okay.

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A. I mean, it's important to have -- I think it's important to include information about the ethnicity of the candidates, particularly to have a mix -- it's useful to have a mix of races that are ethnically contested and races that aren't. But the -- ultimately the issues is the -- is voting for the candidate preferred by minorities, not for the assumption that that's the candidate who is, in fact, an ethnic minority, or in this case who has a minority surname but may in fact not be of that ethnicity at all.

And so, again, I think that's -- it's not to say that with all of that that this isn't compatible with an analysis that would show -- show that done in what I think is a more appropriate way, but in and of itself it's also compatible with a lot of other things.

So I just don't know what to -- it's not the way this is usually done and I -- that doesn't -- you know, the way things are usually done doesn't always mean it's the right way or the best way or even a better way to do things. But in this circumstance I think it attempts to ask too much in a single analysis when a more discrete analysis would solve almost all those problems and be a clearer result.

- Q. So if he did an ecological inference for each of the races that would be preferential, that would be what you preferred, and --
 - A. Yes.

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- Q. -- that would solve the problems you --
- A. All those problems would be solved. If you just do that for all the elections, you'll have elections you'll be able to decide who the preferred candidate is rather than assuming it. You'll then be able to look and see was the preferred candidate almost or always the minority candidate. That's a useful piece of information in itself. You'll have reasonable measures of statistical significance that are actually valid. You know, all sorts of good.
 - Q. So if he did that we might be square, correct?
 - A. Of course I got to look at it.
 - Q. Yeah.

A. But, yes, that's -- I mean, that's really my -my primary criticism here of this is that -- that while
this method is compat -- could be compatible with it, it
could also be showing us something else, and that done
differently we would -- we would be able to deal with
the -- we'd be able to have a shared understanding of
the facts on the ground. And as it is I don't think
that that's really -- it's not clear enough yet in this
analysis.

- Q. I understand. And you also have two specifics indicts, if I recall correctly. One is that you believe he only surveyed specific races, correct?
- A. My understanding is that he said that he -- he identified the preferred candidate as the minority, the candidate with the Hispanic surname.
- Q. Let me just go to the part of your report where you reference that, if you don't mind. I'm going to take a moment. I think you said -- I think this is on --
 - A. Page 3.

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- Q. Yeah. "Dr. Stein's analysis proceeds by selecting only contests with at least one candidate with a Hispanic surname." That's what you wrote, correct?
 - A. Yeah, that was my understanding.
 - Q. If he didn't do that, that wouldn't apply,

correct?

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- A. Correct.
- Q. All right. Fair enough. And then we go -- you go into I think a really interesting description of R and R-square. That's the other specific indict you have about Stein's report, correct?
 - A. Yes.
- Q. Could you explain the R score and what that means to the court, please?
- So R is a measure typically -- it's a correlation measure. It's often called Pearson's correlation, even though it wasn't actually developed by Pearson but by Pearson's mentor. And it's a -- it's a measure that varies between zero and one, with zero being the absence of relationship between two variables presumably at least semicontinuous, and at one a perfect correspondence between the two measures. Unfortunately in the area in between it's not a linear measure. It's a curvilinear measure. And so it's really easy to be deceived by that measure. So an R of 0.5 sounds like you're halfway between zero and one, but in fact you're not. An R of 0.5 corresponds to the independent variable accounting for 25 percent of the variation in the dependent variable. So through the early part of that scale you're really, even when you get up to what

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looked like fairly substantial correlation, you have to get above 0.7 before you're even explaining half the variance. And so if you're familiar with it and you use it a lot, you know, you're capable of kind of making that mental adjustment. But otherwise it tends to suggest there's more here than there is.

In this case the -- I think the correlation is something like 0.33, which suggests that it's accounting for about a third of the variation, when just the -- you know, sort of the optical statistic, you can look at this scatter plot, and it's clear that a third of the variation has not been captured here. And, in fact, that's where -- again, for ordinary least squares the -- actually, the correlation is not really what typically is reported for an ordinary least squares regression. What's typically reported is the R-squared, which is the coefficient that tells you what proportion of the variation in the dependent variable explained by variation in the independent variable. And that's important here because that's really what we're -- we're trying to understand -- you got a variation in the proportion of voters at the precinct that are Anglo or a proportion of voters at the precinct that are Hispanic, and you want to know how much that variation is driving the election results. And in this case it's driving

less than 12 percent of the election result, and 88 percent of this bouncing around is produced by something else.

Q. That's the claim in the report, and I think I understand that.

What level of R-square, if any, should lead to a conclusion that any model is satisfactory? Is there a specific level of R-square?

A. No.

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- Q. Okay.
- A. Well, I guess -- I mean, an R-square of zero -- it depends on what you're -- what you want the model to do.
- Q. A correlation. You want to prove a correlation and --
- A. Oh, a correlation. There are all kinds of scales of correlation that -- you know, some people say, like in the social sciences, a -- you know, a correlation of 0.2 is a pretty good correlation because a lot of things we do have low correlation. You know, that's true for a variety of reasons, not the least of which is extremely poor measurement in the social sciences but -- so in and of itself there's not -- correlation is not -- it's not providing you a metric by which you can judge the degree to which your independent

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variable is -- is impacting the dependent variable. And so it's -- it is very seldom used in the OLS context because -- because OLS produces instead the summary statistic, the R-squared.

- Q. I think I understand. What are some of the factors that might explain the variance in R-square on this model?
- So I think one of the things that probably Α. explains the low R-squared is that you've thrown together -- your data points are not really discrete data points from an event. They're a set of data points from a whole bunch of events. They're at different points in time. So normally if we're looking -- again, if we're looking at a single election, then we could say, you know, whatever the proportion of explained variance is that's how much this variable is explaining about what happened in this election. When you compound this by throwing a bunch of elections together, you've got -- some of this trends over time, and some of this, the very different nature of these elections. these elections are competitive. Some of them are not at all competitive. In a noncompetitive election you're not -- this is not going to explain much in a noncompetitive election because everybody is going to be voting the same way. In a competitive election, it may

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actually be more useful. By separating out the elections you separate out the context. Right? You can say, look, it's really explanatory here. Over here in this election where there was like just a write-in candidate it doesn't explain much, but we wouldn't expect it to explain much. So part of the -- part of the issue here is just there's an artificial increase in the amount of variance that needs to be explained, and that's not a necessary -- that's a choice of putting it all in -- in one picture instead of pulling it out separately.

- Q. I think I understand. But as we're sitting here today you can't explain the variance, what causes the variance here in this R-square, correct? It could be incumbency? It could be issues in the campaign like you said? It could be ballot drift? It could be any of those things, correct?
- A. It's -- it can be a host of factors. All you can say is that whatever those factors are they're more influential, substantially more influential than is the question of what's the racial composition of the precinct.
- Q. And to be the clear, if he did an EI analysis election by election that solves his problem for you, correct?

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A. It doesn't -- it solves part of the problem. Again, it unbundles the characteristics of the election, so you don't -- in trying to analyze what happened in 2020 you're not stuck with the variance that came from, you know, 2015 when somebody ran unopposed and somebody was an incumbent, whatever. You still have the issues that are germane to that election. But in exactly the form you're suggesting you can look at those and say, you know, it's more predictive in this election than this election, why might that be, and you can talk about the characteristics of that election. It's really hard to do that when the election itself is -- it's almost hard to find where the particular elections are in here because they're kind of all over the place.

Q. I understand. That's reasonable. So how about this? Is having a high R-square always good?

A. I don't know. I guess I'm tempted to think that in social sciences you -- it's like a higher -- it's like you can't be too rich or too thin. Right? Can you have -- can you have too high in R-squared? I don't think it's -- certainly there are equations with high R-squareds that are less useful than ones with low R-squareds because it depends on what it is you're measuring. Right? There's an old joke about if you measure the same thing twice, right, you'll get a high

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R-squared, except in the social sciences where even if you measure the same thing twice you don't get a high R-squared because measure and error, et cetera, et cetera, et cetera. So it's a -- it's an indicator of the completeness of the model. Among other things it's -- it's cautionary I think. A low R-squared is cautionary in the sense that, you know, you need to -- you need to pay some attention. It can be humbling in the sense of what you're explaining. It can be challenging in the sense that you know that there's other things to take into account.

It can also reveal that your model is underspecified, so it -- and specification is not just an issue of -- one of the things you can't do is just ignore the fact that the model has a low R-squared, in the sense that your certainty about what's in -- about the parameters in the model is partly a function of what you left out of the model. And if the model is improperly specified, which is often the case with low R-squared models, then a properly specified model may produce a different result. So you point out incumbency. It's possible that if you bring incumbency in as a variable that this correlation will diminish. It's control variables because of specification error. Bringing in the right specification can diminish,

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sometimes can reverse correlation. So it's -- it is -- it's not always better to have a higher R-squared. But certainly a low R-squared signals -- should make you cautious about overinterpreting the one parameter you've estimated because you really -- you don't have a full model that let's you estimate that parameter.

- Q. Is R-squared a biased estimator in the term, whatever that means, the -- the statistics?
- A. Well, it's -- to the extent that you have met the basic requirements for OLS then the R-squared, like the estimates of the parameters, are linear, unbiased estimators. They're -- and to the extent you violate assumptions the -- the nice thing about OLS, one of the many, many nice things about OLS, is that even when you violate assumptions it tends to have more impact on efficiency than it does on bias. So the estimator is often linear -- OLS estimates, even when you violate a condition that causes them not to be the most efficient estimator, they're often surprisingly robust with regard to bias. So, you know, in the -- in the context of social science estimation the -- you know, R-squared is -- is a relatively reliable indication of how good a job you're doing of accounting for variation.
- Q. Could a high R-Square score be a symptom of overfitting your best fit line?

A. Absolutely.

Q. Yeah.

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It's -- you know, as the number of independent Α. variables approaches the number of data points you will, you know, by definition have one less parameter than you have data points. You will perfectly fit your -- fit your line. So in and of itself it's not -- you can -you can produce the high R-squared trivially. On the other hand, I'm not sure that you can produce a low R-squared trivially. I think that really does tell you that -- again, it's not -- in and of itself it doesn't -- it doesn't say you haven't learned anything. It is a -- it is an appropriate caution I think in this kind of modeling, and I think a -- and I think a very valid one because I think one of the things it tells you is this is not the right way to do this analysis. Or I wouldn't say "not the right." Not the best -- not the best way, not the most informative way to do this analysis.

- Q. I understand. When you analyzed Professor Stein's report, I just want to be clear for the record, you used normal R-squared, not R-squared adjusted, correct?
 - A. Correct.
- Q. Okay.

A. There's -- I mean, there is only one independent variable so --

Q. Right.

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- A. But the adjusted R-squared just accounts for the fact that you've got, you know, multiple independent variables. And it produces a result as you get close to reaching a level where your number of variables is close to the number of cases. But the R-squared, adjusted R-squared are not going to be very different here.
- Q. On page 5 of your report, sir, you say -- if you want to turn to that page, I just want to make sure I'm quoting you correctly -- "Taken together, the issues identified above suggest that the evidence relating to Gingles 2 and Gingles 3 provided in Dr. Stein's report are not sufficient to meet the plaintiff's burden of proof on these two threshold conditions, or the broader totality of the circumstances." Is that what you wrote, sir?
 - A. Yes.
- Q. Okay. And I'm not trying to get horsey with you. I think I -- you know I have enormous respect for you, but I want to be clear about a couple of things. You're not an attorney, correct?
 - A. Correct.
 - Q. And you've never done a survey of burdens of

1 proof or sufficiency of evidence, correct? 2 Α. Correct. 3 And while you have extensive background in 4 testifying you have no background in what sufficient 5 evidence is for a judge, correct? 6 Α. Correct. 7 Okay. In the final part of your report you Q. 8 cite I think this -- this report from Abott and 9 Magazinnik; is that correct? 10 Α. Yes. 11 Okay. I'm going to hand it to you. 0. I've 12 labeled this Exhibit 5. We're out of order. Ι 13 apologize. But I just did it incorrectly. 14 Could you review this and make sure this is 15 the right article? 16 Α. I think this is right. 17 And so in the final part of your report you 0. 18 caution us based on this article that the use of 19 single-member districts may actually be worse for 20 Latinos in some communities, correct? 21 Α. Correct. 22 And that's based largely on the data for these Q. 23 California elections that are analyzed by Abott and 24 Magazinnik, correct? 25 It's -- as they cite, they're unlike the Α.

literature on single-member districts and black representation. There's long been controversy about whether that same relationship was present for Latino voters sometimes in earlier studies, sometimes in different locals. So they're really addressing what's kind of been a mixed set of findings in the past, I guess a much more -- a much less certain area of the literature than would be the case for the value of single-member districts in providing for increased black representation.

- Q. Okay. That's in relation to the Latinos you mean, correct?
 - A. Correct.

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- Q. All right. And I think in your report you posit that in highly segregated areas with low vote participation by Latinos single-member districts may not lead to more representation. That's what you posit, correct?
 - A. I'm not -- I'm not positing that.
 - Q. Okay. You're just recording that?
- A. So -- yeah. And particularly -- so this is -I don't cite these -- I've never cited this paper in a
 report before. I'm citing it only because when
 Dr. Stein laid out kind of his three areas of evidence
 he suggested that this was part of what he was advancing

in the report, and it's his citation to their work that I'm referencing. So what I'm just providing is sort of some context for his discussion of their -- of their report. I think it -- their -- what their conclusion that I quote indicates is that they see there's reason in some areas to be cautious because the effect is not going to be -- in their view is not going to be uniformly positive. It may just be -- it may be neutral. It may be negative. And, again, I think that just provides some context for what Dr. Stein is saying here. It's not something I'm saying. It's just, I think, is a little bit of a corrective to what he's saying they're saying.

- Q. Okay. So you're not going to testify about it?

 This is not something you're saying you will testify about?
- A. I mean, if I'm asked about it, I would testify about it.
 - Q. All right.

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- A. I don't get to control that.
- Q. I'm going to need to delve into it just a little bit, then, if you don't mind.
 - A. Yeah. Absolutely.
- Q. In this -- on the report on page 7, you say the following: "Spanish Surname Registered" -- I guess turn

1 It's on the -- it looks like the second full 2 paragraph. It's the second sentence. It starts with --3 Α. Yes. 4 0. -- "Spanish Surname Registered Voters (SSRV) 5 make up less than 20 percent of the registered voters in 6 Spring Branch ISD, and in the most recent school board 7 elections that included the Position 4 Elizondo -8 Earnest contest, Spanish Surname Registered Voters made 9 up less than six percent of the actual election day Spring Branch voters." Correct? 10 11 Α. Correct. 12 And then you draw similarity, is it fair to 13 say, between the article's use of voter eligible 14 population and SSR -- SSVR, correct? 15 Α. Correct. 16 0. But isn't it true that -- how about this? How 17 does Abott and Magazinnik define voter eligible 18 population in their article? 19 I believe they're using -- I don't know if 20 they're using VAP or CVAP. I don't recall. 21 All right. Let's take a look at the article so 22 we're not -- I think it's on -- it's on Figure 4. 23 think this is page -- let's see. Here's the exhibit. 2.4 One second. Let me find it for you. I apologize. 25 should have put the page number here, and I thought that

1 I had. 2 MR. ABRAMS: Figure 4 is on page 22. 3 MR. GOLANDO: Twenty-two. Okav. 4 0. (BY MR. GOLANDO) On page 22, sir, here, I 5 believe the discussion -- so I think it's on page 21. 6 MR. ABRAMS: The text begins on page 21 at 7 the bottom. 8 MR. GOLANDO: Yeah. 9 So here it is. How are they Q. (BY MR. GOLANDO) 10 defining -- what is your understanding of how they are 11 defining voter eligible population? 12 So they -- it looks like they're defining it as 13 CVAP or H -- I guess Latino CVAP or Hispanic CVAP. 14 So HCVAP and VEP are the same thing here, 15 correct? 16 Α. Yes. 17 And would you agree with me that SSVR and HCVAP 18 are different measures? 19 Α. Yes. 20 0. And SSVR is a lower measure often done, or has 21 to be --22 Well, one hopes. Α. 23 One would hope so. 0. 2.4 Not always in Texas or Louisiana. But, yes, it Α. 25 should be a subset of CVAP.

1 And in SBISD it is absolutely a subset of 2 HCVAP, correct? 3 It is lower than CVAP, yes. Α. 4 0. And so HCVAP is likely to be far higher in 5 SBISD than SSVR, correct? 6 Α. It is higher. 7 I think I got the adjective. It's higher? Q. 8 Yeah, it's higher. It's -- it's significantly Α. 9 So it's not just marginally higher. higher. 10 significantly higher. 11 Q. Okay. 12 Α. Yes. 13 And so in the article itself on page 22 --14 let's pull it up for you again -- there are a couple of 15 different graphs. If you'll look at Figure 5, I 16 believe, it says -- in the article it says "there is a 17 dramatically" -- "dramatic and precisely estimated 18 positive effect in large districts that are composed of 19 at least 30 percent Latinos." That's Figure 5. What 20 does that mean exactly? 21 That means that there's -- there's an upward 22 slope when they constrain or confine the population for 23 the figure to that set of districts. 2.4 0. How does the -- what is the definition of a

large district in this article?

You mean a district with a large Latino 1 Α. 2 population? 3 I think they actually do it by enrollment, if 4 I'm not mistaken. Maybe here is the -- so small 5 districts -- so how does the article define a small 6 district? 7 Α. Enrollment of less than 13,700. 8 And how does it define a large district? 0. 9 Larger than 13,700. Α. 10 And how many students does SBISD enroll? 0. 11 Α. I have no clue. 12 Q. Is it higher than 13,000? 13 Α. I would think so. 14 It's probably a large --0. 15 Α. It's a big district. Yeah. 16 Q. Fair enough. How many Latinos have been 17 elected to the school board in SBISD's history? 18 I don't know. Α. 19 Would you be surprised to hear there was zero? Q. 20 I wouldn't be surprised, no. Α. 21 And how many African Americans have been 0. 22 elected in SBISD's history? 23 Α. I don't know. 2.4 Would you be surprised if it was zero? Q. 25 Α. No.

- Q. How many have been appointed?
- A. I don't know.
- Q. And would you be surprised it was zero?
- A. No.

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- Q. Okay. The fact that the voter eligible population is north of 20 percent and that SBISD is a large school district, does that change your opinion of whether or not single-member districts might be a better fit given this article?
- A. I guess I'm -- I'm going on what they say, which is "increasingly racially polarized voting coupled with small numbers of Latino voters relative to other groups-may create new barriers." And so they're actually talking about the small number of voters, so I guess -- I don't know how eligible is translating into voters in California, but eligible is not translating into voters here. And so in the sense that their concern is about what happens when you have a small number of Hispanic voters in an increasingly polarized, politicized environment as a result of issues related to change in the nature of elections, they offer a caution about that I think is -- continue to believe is precisely correct for SBISD.
- Q. But right now you would agree with me that there's zero chance that a Latino preferred candidate

1 can be elected today, correct? 2 I didn't know you thought that, and I don't 3 agree with it. Okay. Let's just go historically. 4 0. 5 Historically the minority preferred candidate has not 6 been elected, correct? 7 I don't know that that's correct. I don't 8 believe it's correct. 9 Fair enough. You said before that you believe 10 that the Latino candidate is usually the Latino surname 11 candidate, correct? 12 I said I thought it's probably the case that 13 when -- yes. So if there's a Latino -- a candidate that 14 is Latino I think they probably would usually be the 15 preferred candidate of Latinos, yes. 16 0. And it's -- you were not surprised to learn 17 that no Latino has ever been elected to the school 18 board --19 Α. Yes. 20 -- in SBISD, correct? 0. 21 (Moving head up and down.) Α. 22 So the Latino preferred candidate in SBISD Q. 23 elections has never been elected in SBISD, correct? 2.4 MR. CRAWFORD: Objection, form. 25 No. That's -- most of the elections to SBISD Α.

1 board have not included Latino candidates, and so in --2 I assume in many of those elections the --3 (BY MR. GOLANDO) Fair enough. 4 Α. -- Latino preferred candidate was elected. So 5 a Latino that was the preferred Latino candidate, if --6 and I'm just accepting your assertion that no Latino has 7 ever been elected. If it's true that no Latino has ever 8 been elected, then the Latino candidates that were also 9 the preferred candidate of Latino voters, which is a 10 subset, has not been elected. 11 And that's -- that's a much better way to say 0. 12 that. 13 Α. Okay. 14 And you agree with that, correct? 0. 15 Α. I agree with that. 16 Q. All right. So the chance -- okay. Fair 17 I think I understand. enough. 18 Did you review Professor Stein's proposed 19 single-member district plan in his report? 20 I looked at it. One of the things that I was 21 clear about in the sort of scope of what I was going to 22 do and the amount of time I had to do it was that I was 23 going to stay out of being a demographer. 24 Q. I understand.

So I did not do any -- I looked at it.

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Α.

1 recognized what it was. It's a -- a modified version of 2 the -- he says basically the polling places. It isn't. 3 0. No. 4 It's a -- I mean, that obviously -- you know, a 5 quick look at the population deviation will tell you 6 that -- you know, nobody gets the population perfect in 7 an attendance district because there it's about 8 students, not about people. So -- but it obviously is 9 based on -- the cores of the districts are the 10 recognizable cores of the -- of the current polling 11 places are, which would be the attendance districts, 12 with some modifications to -- you know, to get the 13 population equal. So that's what I saw there. It looks 14 like the area that he says is the district that's CVAP 15 majority is an area where I would suspect there's a --16 it could be you could draw a CVAP majority district 17 so --18 Does anything about that district give you 19 pause as a map drawer? Because you've done that in the 20 past, correct? 21 MR. GOLANDO: Actually, strike that. Let 22 me just do it correctly. 23 (BY MR. GOLANDO) Historically you've drawn Q. 24 maps for jurisdictions, right?

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Α.

Yes.

1 All right. So you have a vast history of 0. 2 drawing maps, correct? 3 Α. I've drawn a lot. I wouldn't say vast. 4 Q. Okay. 5 Α. But I've drawn a lot of school district maps, 6 yes. 7 Fair enough. Does anything about that, the way Q. 8 it's shaped geometrically, give you pause? 9 Α. No. 10 Would you agree that it's a compact district? 11 Α. Yes. 12 Okay. Would you agree that if the numbers are Q. 13 correct that it's CVAP majority? 14 Α. Yes. 15 0. Would you agree that that map meets Gingles 1? 16 MR. CRAWFORD: Objection, exceeds the scope 17 of his engagement and his opinion. 18 0. (BY MR. GOLANDO) But as an expert in map 19 drawing I'm asking and as -- and one who's drawn several 20 Gingles 1 maps does it meet the form of Gingles 1? 21 Again, I -- so I haven't looked at any of this, 22 so I'm going entirely on your assertion that the numbers 23 that were provided match the numbers that -- the 24 picture. Right? And I have no idea whether that -- you 25 know, whether that picture actually produces the numbers

1 or not but --2 0. Sure. 3 -- if that picture produces those numbers, and 4 that's the most current CVAP estimate, then I'd say 5 that's what you'd be looking for in a -- you know, in a 6 district to establish Gingles 1. 7 Q. So yes? 8 Same objection. MR. CRAWFORD: 9 Α. Yes. 10 0. (BY MR. GOLANDO) Thank you, sir. All right. 11 Only about nine more pages. 12 Is the Latino community in SBISD 13 sufficiently large and geographically compact to 14 constitute a majority in a single-member district? 15 I don't know. 16 Q. In your experience? You've drawn maps. 17 I don't know. Α. 18 And you've reviewed election analyses, and you 0. 19 know SBISD well. You've worked here for 20 years. 20 In your opinion, given your broad history 21 of working with SBISD, do you think it's sufficiently 22 large and geographically compact? 23 MR. CRAWFORD: Object to the extent it --24 Α. I mean, I don't have --25 MR. CRAWFORD: -- exceeds the scope of his

1 opinion. 2 Α. I don't have an expert opinion about that. 3 (BY MR. GOLANDO) How about just a lay opinion, 0. 4 then? 5 A lay opinion? It wouldn't surprise me. 6 quess that's one of our -- that's one of our answers. Ι 7 wouldn't be surprised if that was true, but I haven't --8 I have not at any time trying to draw -- tried to draw a 9 So, you know, I don't have any -- I don't have any information to add to this beyond what is in 10 11 Dr. Stein's report, but it wouldn't surprise me. 12 Based on your years of experience in data 13 reviewed for SBISD are Latinos generally politically 14 cohesive in SBISD elections? 15 Again, it's -- you know --16 Q. It's a range? 17 Α. It just depends. It's a range. And they're 18 certainly not in the -- not cohesive at the levels that 19 we would traditionally see for black voters. 20 And that would be 90 percent and above, 0. 21 correct? 22 Α. Yes. 23 0. Okay. 24 Α. And I'm not sure even -- if it would even be 25 cohesive at the level you would normally see in a

1 general election. So there's some -- again, there's 2 modest to moderate cohesion. 3 Based on your years of experience as an 4 election analyst and demography expert, in the data 5 reviewed for SBISD historically, not just for this case, 6 but historically are Anglos politically cohesive in 7 SBISD elections generally? 8 Moderately I'd say. I mean, it's -- it varies 9 from election to election. But, yeah, it's a --10 probably -- probably somewhere in that same range, but 11 I don't really know. 12 Q. Based on your years of experience and the data 13 reviewed for SBISD do Latino voters in SBISD elections 14 support different candidates than Anglo voters in SBISD? 15 I have not -- I don't know. Comprehensively I 16 don't know. 17 0. You did an EI report, correct? 18 Α. The what? 19 You did an EI before the litigation began? Q. 20 Α. Yes. 21 Okay. And you recall the contents of that EI 0. 22 report, correct? 23 Α. I do. 24 And I'm asking you to call into that based --

based on your expertise and your -- the data you've

1 collected and your experience in SBISD. Do you recall 2 whether or not Latino voters in SBISD elections support 3 different candidates than Anglo voters generally? 4 Α. I guess I'm not clear on -- I mean, you're 5 asking me about the results of the analysis that I 6 provided the attorneys, so I'm not sure -- is this 7 like -- are we back in the realm of what's acceptable 8 here or --9 I'm asking you just based on your experience. 0. 10 It's a question about do you believe them to be so based 11 on the entirety of your experience here? 12 MR. CRAWFORD: And based on Dr. Alford's 13 interpretation of the question I think it would call for 14 protected communications, and so I'll instruct you not 15 to answer. 16 Q. (BY MR. GOLANDO) You can answer if you want. 17 I've been instructed not to answer --Α. 18 Fair enough. 0. 19 Α. -- by my employer. 20 I think we've asked that question before. 0. 21 In your opinion based on your years of 22 experience at SBISD, does the Anglo majority vote 23 sufficiently as a bloc to enable it to defeat the 24 minority preferred candidate? 25 Α. I would say sometimes.

1 How often? 0. 2 Α. I don't know. 3 More often than not? 0. 4 Α. I don't know. 5 Does Texas have a history of official 0. 6 discrimination in the jurisdiction in SBISD that 7 affected the right to vote? Does Texas have it? 8 Now we're -- we're not just outside of my 9 expertise on this case. We're just --10 I'm just trying to limit your testimony. 11 I just want to make sure you're not going to testifying 12 in totality. So if you don't have an opinion that's 13 great. You can just say "no." 14 Yeah, I don't have an opinion. 15 0. Okay. Does Harris County? 16 Α. I don't have an opinion. I don't have an 17 expert opinion. 18 Does SBISD? 0. 19 I have no idea. Α. 20 Does SBISD use the place system for voting? 0. 21 It's my understanding they do. Α. 22 Okay. Have minority candidates been denied Q. 23 access to the jurisdiction's candidate slating process 24 formally or informally to your knowledge? 25 I don't know anything about the slating Α.

process, if there is one.

- Q. Are SBISD minorities discriminated against in socioeconomic areas such as education, employment, or health?
 - A. I don't know.
- Q. Have there been overt or subtle racial appeals in campaigns in SBISD elections?
 - A. I don't know.
- Q. Okay. Has a minority ever won an election in SBISD to your knowledge?
 - A. I don't know.
- Q. Okay. Are elected officials -- are the SBISD trustees responsive to the concerns of minority voters in SBISD? Do you have an opinion?
 - A. My opinion, yes, I think they are.
 - Q. What is that based on?
- A. Just on -- you know, the degree -- sort of my sort of nonexpert kind of information you get from reading the paper sort of thing, that certainly there's -- you know, the district floats bonds and builds facilities in a variety of areas. Like most districts they run a -- you know, the bilingual education program. They have programs that are designed to, you know, help students, early start kinds of things, whatever. So that's just -- my sense is the

district has a reputation as a district that has, you know, made a variety of efforts, provided resources and expertise directed toward -- toward minority students.

Q. Will you be testifying about that?

- A. I don't think so. It's not an area in my report. It's not my area -- I mean, that's -- again, that's a -- you can have a sense about that, and then there's empirical information about it. I don't have the empirical information and it's not an area that I do work in so I don't testify about it.
- Q. Fair enough. We're entering the last stages, the -- my category of this is fun stuff, so I hope this is enjoyable for you. It will be for me.

My first question to you actually is what is the ecological fallacy?

A. So the ecological -- normally you gather data at the level that you want to ask or answer a question. So if I want to know what effect people's gender has on how they vote I would -- because that's a question in which the unit of analysis of the question is an individual person then the unit of analysis for my study should be people. So I would ask people about their gender, and I would ask them about how they vote. And that would be a normal analysis. An ecological analysis is one where your -- your question -- you want an answer

1 at the individual level, but you're not getting the data at the individual level. You're getting it at some 2 3 level of aggregation. So, for example, I could do a 4 study of counties in the United States based on the --5 what proportion of the county is male and female, and then look at Republican, Democratic voting, and try to 6 7 draw a conclusion about the effect of gender on 8 Republican or Democratic voting. And that's the 9 ecological fallacy, right, that -- that once aggregated 10 that the variation across those aggregations is 11 disclosing simply the same variation that's taking place 12 across individuals. It's not necessarily the case that 13 that's happening.

- Q. Okay. So as I learned it -- this is very -- this is like Science 101, right -- it's when you infer individual behavior from aggregated measurements. Is that fair?
 - A. Yes.

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- Q. Okay. So ecological regression describes a voting behavior between certain relationships, right?
 - A. Correct.
- Q. Okay. But you can't infer the intent of the voter, correct?
- A. It doesn't measure the intent of the voter.

 People infer the intent all the time.

O. For sure. Right.

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But, no, you don't have -- you're not measuring the voter's intent, although it's true in any research scheme you have a variety of tools that help -- can help you to eliminate certain possibilities or to make certain things more likely than not. So I'm going to give you an example in a partisan general election. you find that -- as I talked about earlier, if you find that when the Republican candidate is a Hispanic, Hispanics vote against that candidate when -- when the candidate is Anglo. So what you see there then is a pattern, that the changes in the partisanship of the candidate drives voting, but the changes in the ethnicity candidate doesn't drive the voting. That's sufficient -- not that you would know that from any one analysis, but that's sufficient to suggest that given that you've added this other condition that the behavior of the voters, whatever their intention, their behavior is not being driven by the signal that they're getting, right, because you've separated two signals, signal about the candidate and party, and signal about the candidate and ethnicity. And where you can separate those you can see whether it's a mix of those or whether it's mostly one or mostly the other or neither.

Q. So you infer the intent of the voter by

subtraction almost, correct?

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You still don't infer the intent. I'm very uncomfortable with intent analysis in all of its forms. I don't believe people have intent quite frankly. requires that people have a unified personality, that people have -- that people's brain is -- that part of the brain that actually makes decisions is entirely in control, and therefore the -- I mean, I think just the idea that -- I mean, there's a lot more than just unintended consequences. There are just completely unintended actions as well. So even talking about intent at the individual level where you have the most chance of it making sense I'm not comfortable with it. We certainly don't have tools for teasing that out. And then, of course, when you get to collective bodies my favorite is the intent of the legislature. Anybody who has ever been near a legislature knows the idea, as you well know, that the legislature itself generates an intent, it's like forget about the -- I mean, the individual legislators could barely figure out what their intent is on a good day. Collectively Lord only knows what's going on but --

Q. Yeah. I think voters are pretty irrational, I think legislators are definitely irrational, in policy meetings pretty irrational, right? I understand.

A. And collectively whatever we're guilty of as individuals put -- put us in groups of two, in groups of four, in groups of eight, in groups of twelve, and then talk about the outcome of that irrationality when it gets aggregated. And I think it's really -- it's not just difficult. I just don't think it's -- that there's a value to it. So I don't think it's valuable to talk about the intent of the -- to the intent of the voters. I think it's valuable to talk about -- certainly it's valuable to talk about what the cue is the voters are responding to. And this is a context where that's really important. If the -- if voters are responding to a cue of ethnicity, then that tells you something about the behavior. And if they're not, it tells you something about their behavior and --

- Q. And we would know that they were responding to a cue about their ethnicity in this case if we ran an EI and there was cohesion for Latino voters and cohesion for Anglo voter candidates, correct?
 - A. No.

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- Q. How would we know, I guess is more or less --
- A. Okay. So that -- we can certainly distinguish -- again, you need an analysis that brings in some other factors so that you can tell whether that's the factor that's explaining it or the cue. Just

as if you don't bring in partisanship you can't tell the difference in the -- you know, in a general analysis. So if you -- I mean, you can look at -- you can vary things like, you know, the location of voters within the district. You can vary things about, you know, the voters' opinions and so forth. So there are a lot of other things you can look at that -- you know, that would allow you to at least get some sense of how powerful or durable or influential any particular characteristic is.

Q. Okay.

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- A. But I still think it's -- it's not really -- it's not really about intent. It's about -- it's about the behavior rather than the internal process.
- Q. Do you believe that there is a link between biology and political ideology?
 - A. Yes.
- Q. Could you tell me what that -- what you believe that is?
- A. So for many aspects -- so I -- first of all, ideology is not an abstract way of organizing your thinking about the world. This is some of the oldest work in American politics. You ask people ideology in the "ism" sense, liberalism, conservatism, communism, you know, libertarianism, whatever, they don't have a

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They don't know what the basic principles are. clue. They never apply them. They have no clue. So at the same time, as John Jost has pointed out, the behavior of voters is remarkably -- if you know, you know, as he says in "The End of Ideology," if you think ideology disappeared from American political life you must not be seeing the same American political like I'm seeing because this ideology runs rampant. So what is it? And clearly it's -- you know, we don't have to scratch the surface to know it's not principle. Right? So if it was principle conservatism then -like Greq Abbott believes local governments should make their own decisions, not central governments. Right? Well, yeah, that's true. Just tell me what the subject matter is of the local government, and I'll tell you whether he favors it or not. So that's not the same thing as saying that he's not ideological. Right? He's very ideological because the kind of things he wants to stop Harris County from doing are a very specific kind of thing. Right? It's not hard to predict what Governor Abbott is going to get on about these days. It's going to be a series of things that are very closely related. And as it happens those things are closely related to things that vary in the way human brains are built. So --

Q. How do you --

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A. -- the more --

Q. I'm sorry. I didn't mean to cut you off.
Please go ahead.

A. So, I mean, the more easily disgusted someone is in general the more conservative they'll be in general on a very specific set of conservative issues, those issues related basically to sexual behavior. So I can do a really good job if I just know how easily you're disgusted. And I can measure that by skin conductance, by -- just by showing you a picture of somebody eating worms. I can measure your skin conductance, and I can do a good job of predicting your opinion on gay marriage or abortion or premarital sex, things that are related to basically just sexual purity or sanctity. I can't do a very good job of saying whether you're a fiscal conservative or whether you're a hawk, but I can for that particular area.

Q. Are there any other areas that are close to sexual areas?

A. Well, I mean, if I'm -- if instead of giving you a disgusting image I give you a threatening image, or I unexpectedly play a loud burst of white noise in your earphones, I can do a very good job of predicting your position on securing the border, gun control, more

funding for the military, whether you would like to have a bomb shelter in your backyard in the '60s. So we have a mechanism in our brain that responds to threat.

It's -- among other things it's a -- part of that is a startle mechanism. So we startle when we hear loud noises. People who are conservative on national defense startle significantly more easily than do liberals on national defense, even if the -- what they're startling to is just a burst of white noise, absolutely content free. That startled reaction varies across individuals. And there's a really nice study that looked at startle reflex in infants, so how easily startled is an infant because that gets recorded as part of Apgar. Like, you're supposed to startle.

Q. Sure.

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A. So they recorded that, and then followed that up like 40 years later with how easily startled they were as adults. And it's a -- there's about a 90 percent predictive relationship. So our startle ability, the degree to which our amygdala and the networks that serve the amygdala moving both to impulsive reactions, like a jerking motion, and to things like sensing, feeling, experience, and fear, those things are -- those differences are differences we're born with. And so being born into -- being born a

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person who is more easily startled or has a more active threat system or threat recognition system places you in a more threatening world. And someone who has, you know, very little of that kind of -- and I think both liberals and conservatives recognize this. Right? Liberals recognize that conservatives see a more dangerous world. And, of course, because different ideologies like to be pejorative with each other liberals say conservatives are just paranoid, and everywhere they look they see a threat. Right? And then you ask conservatives like, "Well, what about liberals?" And they say, "Oh, yeah, that's great. Put liberals in charge of the Defense Department. They don't see threats anywhere." Right? "Liberals wear rose-colored glasses. They look out in the world and say, 'Maybe if we were just nice to them they'd be nice to us.'" And conservatives say, "No. You could be nice to them, and they'll kill you." Right? So one side is seeing a scarier world than the other side. We know that if we manipulate how scary the world is, like if you make conservatives feel safer, you put them in a safer environment, you create a safer system, they become more liberal in their views. They actually become more liberal across a fairly wide range of views. If you threaten liberals, they become more

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conservative. So you have both a resting state difference, and then you have this reaction difference. Right? If I ask you whether homosexual relations are inappropriate or immoral or -- well, that would work 20 It doesn't really work anymore except with years ago. people over the age of 70. It won't work with students There's no variation in that at all. But if I ask you whether incest was appropriate on a scale of one to five, from one being absolutely never, you know, to five being sure, what the heck, if I ask you that in a nice, clean setting you'll answer that measurably differently than if you do that in a setting where there's something that might prompt disgust, a presence of rotting food or -- one study that's a remarkable study, they -- the only thing they varied in the entire study was when they would direct the students who came in in the central entryway, and then the hallway split. And one side of the hallway was a hand sanitizer dispenser. On the other side there wasn't. So the experiment is just to flip which light of the hall the table is on when they fill out the survey. So they either told the students to go to the right, or they told the students to go over to the table by the hand sanitizer. That changes people's opinion. measurably changes their opinion on gay marriage, on

homosexuality in general, on abortion, on a whole series of things related to sexual purity.

Q. That is fascinating.

A. Just a prompt of purity. It's something as simple as that that prompts purity. And if you think about traditional notions of ideology it's very hard to understand why purity is a part of that at all.

Honestly, what in the -- in the thoughtful scheme,

Marxism or John Locke or whoever, what does sexual behavior got to do with it? How did it get to be so central to the political debate between liberals and conservatives not just here but in every country in the world and every period of history? Why is it so central? Why is it so central to religion, between liberal and conservative religions? Why is it important to the orthodoxy and not important to the reformed?

So my answer to that is the reason that it's central and the reason it's ever present is that human beings differ from each other. And they differ in two ways. They differ in the sense that their life experience is completely unique. And so you are who you are because of what you lived. But you also were completely unique the day you were born. And that uniqueness the day you were born is not just your genes.

25 It's a whole set of structures inside your brain that

are going to make you a different person than, for example, your twin. I have twins, and they are as different as night and day. And the same is not true for identical twins.

Q. That's true.

A. Identicals are not different as night and day. The likelihood that they'll share the same adult ideology is twice as high if they're identical twins as if they're not identical twins. And parents don't raise -- parents don't tell -- when they have identical twins, they don't say, you know, "Republicans are great, and let's support Donald Trump." But if they're nonidentical twins they take one of them aside and say, "Trump is a great guy." They take the other one aside and say, "Joe Biden is a terrific guy." Right? They lived in the same environment, they were born at the same time, and yet they are markedly different on fundamental issues like political ideology. And that to me tells me there's a biological basis to it.

And that biological basis, like all the rest of our biology, is just distributed randomly as a result of sexual reproduction. Right? I'm more likely to have the same -- politics runs in families because, after all, George W. Bush has 50 percent of George H.W. Bush's genetic material. Preston, on the other hand, is

1 out there like 1.12 percent, so you're going to -- as 2 the family spreads out, you see -- you see more 3 difference. And then more broadly across the population 4 we're for the most part unrelated. We share 5 approximately zero segregating genes within the average 6 person in the population so --7 That's interesting. And the course of that 8 study -- I think that you cited this study -- it's 9 called "Political Attitudes Vary with Detection of 10 Androstenone"? 11 Androstenone. Yeah. Α. 12 Am I saying that correctly? This is your work, Q. 13 correct? 14 Α. It's a team. 15 Yeah, of course. I've labeled this Expert --16 Expert Exhibit No. 4. Could you review it and

authenticate it for me, please?

It looks like the study.

- Q. So this is a report you published with three other folks it looks like; is that correct?
 - A. Yes.

Α.

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- Q. And could you describe what this report is to the court, please?
- A. So this is a study that -- there's a -- people have a biological difference in their ability to detect

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and in their classification of the pleasantness or unpleasantness of androstenone. And this is a study that looks at whether that difference is related to anything that might be related to politics, in particular to sort of what broadly might be called a preference for hierarchy.

Q. And what were the findings? Do you recall?

A. The findings, that there is a modest relationship between the ability to and the valence on the detection of androstenone and a preference for hierarchy.

Q. So what is androstenone? I'm not sure I understand what it is.

A. It's a -- it's a -- it's a chemical that's present in humans. It's a -- part of a breakdown product of testosterone. So it's slightly more elevated in males than females, but it's present in all humans. It makes its way as a discrete molecule out of the body through sweat. And when you give people a whiff of it people either -- a substantial portion of the public can't smell anything, so they don't detect any odor at all. And then another set of the public describes the odor as being similar to vanilla or ginger, something like that, a kind of a pleasant spicy odor. And then another portion of the public describes the odor as sort

of offensive. Urine is one of the things people often say it smells like. So for some people it's a very unpleasant odor, for some people it's a pleasant, pleasing odor, and then for some people it's no odor at all.

Q. That's interesting.

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There are actually -- although we have the ability to separate about 400,000 chemicals through our olfactory sense, which is in itself a remarkable -- it's the only part of our brain that's exposed to air. olfactory bulb is literally a part of the physical brain that protrudes out into the sinuses in order to have the immediate ability to detect these chemical keys. And the keys are very specific. There is a -- there is a receptor for every single chemical that you can detect. The ones where the receptor is -- where we have receptors that at one time were active but are no longer -- because of mutation are no longer functional, we can't smell, so we actually over time have lost a lot of active receptor capability. And uniquely among things related to brain physiology each one of those receptors has to be built by a separate gene. So as a class we have more genes for olfaction receptors than we have for any other

physiological character, precisely because it takes a

separate gene to build the protein that can detect the chemical key for each one of them. And what that means is across that you very often have situations where people are more or less able to smell certain things. So some -- for almost everything there's at least some subset of people who can't detect the odor because of a mutation in the -- in the genes or an improperly formed receptor. But it's rare to have -- and often that's accompanied by people who describe it as intensely something or not so intensely something. But it's rare to have a complete valence, for something to be detected by some people that's very positive and other people it's very negative.

- Q. That's fascinating.
- A. Cilantro is the --
- Q. Right.

- A. -- the only taste equivalent in taste, is that cilantro either tastes lovely or like soap. And people -- a lot of people don't like soap in their food. I don't like soap in my food, so I don't like cilantro. But other people find it wonderful. So it's in that same rare category.
- Q. Yeah. I love it, so I guess we're just different.
 - A. There but for the grace of God, go I.

1 So it looks like on page 14 -- if you will turn 2 to that, please. I want to discuss some of the 3 findings, if you don't mind. On the bottom part it 4 discusses the results for the political batteries or 5 some of the batteries in Table 1; is that correct? 6 Α. Yes. 7 And it looks like there was some findings. Q. So 8 it looks like "Preferences for literalism were 9 positively correlated with androstenone intensity, 10 albeit at a relaxed level of significance." Is that 11 correct? 12 Α. Correct. 13 0. What's the R score for that? 14 Α. 0.16. 15 0. Okay. Now, you stand by that finding, correct? 16 Yes. Α. 17 0. Okay. What is the R-square score for that 18 finding? 19 Α. That would be whatever 0.16 is squared so it --20 I have that as 0.0256. Correct? 0. 21 That would be correct. Yes. Α. 22 Is that lower or higher than Bob Stein's Q. 23 R-square? 24 Α. Lower. 25 Okay. Again on -- you wrote a little bit below 0.

1 that that "disgust sensitivity and androstenone 2 intensity" -- let's see here -- so there's a -- I'm 3 going to get you the whole thing. "The same trended for 4 disgust sensitivity and androstenone intensity." Is 5 that correct? 6 Α. Yes. 7 And you stand by that finding, correct? Q. 8 Α. Yes. 9 What is the R score for that finding? Q. 10 That one is 0.16. Α. 11 And what is the R-square of that finding? Q. 12 Α. I assume it would be pretty similar to the 13 previous one. 14 Q. Correct. Yes, sir. 15 Α. Yes. 16 Q. And I think I have that as 0.0256. Correct? 17 Α. Yes. 18 And is that lower or higher than Bob Stein's Q. 19 R-square? 20 Α. Lower. 21 Okay. I think there is another finding here. 0. 22 "Threat sensitivity." Right below that it says "Threat 23 sensitivity was also positively correlated with 24 androstenone intensity." Is that correct? 25 A. Yes.

1 And you stand by that finding, correct? Q. 2 Α. Yes. 3 And what is the R score of that finding? 0. 4 Α. That is 0.17. 5 And what is the R-square score of that? 0. 6 Α. Slightly, however slightly, minisculey higher 7 than the previous two. 8 I have that as 0.0289. Does that seem correct? 0. 9 Α. That seems correct. 10 0. Is that lower or higher than Bob Stein's 11 R-square? 12 Α. Lower. 13 Okay. Further down you wrote that 14 "androstenone intensity was positively correlated with 15 the Preferences for Social Order battery." 16 correct? 17 Α. Correct. 18 And what was the R score for that finding? 0. 19 Α. That is 0.19. 20 0. Pretty good? 21 Α. We're starting to get up there now. 22 getting pretty close to -- we're getting to the threes, 23 aren't we? 2.4 Q. Yes, sir. 25 Α. I'm getting excited.

1 So what is the R-square of that? 0. 2 Α. It's something in the -- between three and --3 0.03 and 0.04. 4 0. I have it as 0.0361. Does that sound about 5 correct? 6 It sounds fair. Α. 7 Q. All right. And you stand by that finding, 8 correct? 9 Α. Yes. 10 And is that lower or higher than Bob 11 Stein's R-square? 12 Α. Lower. 13 Further down you say "we do find that 14 androstenone intensity continues to exhibit a 15 significant positive relationship with preferences 16 for social order." Is that correct? 17 Α. Correct. 18 And do you stand by that finding, sir? 19 Α. Yes. 20 Okay. And what was the R score for that 0. 21 I have it as -- it should be on page 16 in the 22 full -- first full graph, the last sentence, or the next 23 to last sentence. "Though we do find that androstenone 2.4 intensity continues to exhibit a significant positive 25 relationship" --

1 Yeah. 0.21. Α. 2 Okay. And what is the R-square for that Q. 3 finding? 4 Must have made it to 0.04 by now. 5 Yes, we did. It's 0.0441. Is that correct? 0. 6 That seem about right to you? 7 That seems a little higher than I would think, 8 but okay. I'll take it. 9 Well, let's just do it real quick. Let me see, get a calculator. I may have done it incorrectly. 10 11 not a social scientist. I just square the number, 12 correct? 13 Α. Yeah, you just square the number. 14 0. Okay. 15 I'm not a calculator, so we're in the same boat 16 when it comes to this one. This is not really about 17 being a social scientist. I don't know. It just 18 seems -- oh, golly. We are getting somewhere. I'm 19 impressed. 20 Just to be clear with the record, the R-square 21 for that finding is 0.0441, correct? 22 Α. That's correct. 23 And is that lower or higher than Bob Stein's Q. 24 R-square? 25 Α. Lower.

Q. Okay. That's all I have, I think, on that.

Would you believe that biological
ideological preferences, are they more outcome
determinative in a nonpartisan election I wonder?

A. It's -- I haven't really thought about that much. It's -- partisanship itself is -- the direction of partisanship itself is not very biological.

Q. Okay.

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A. So there's very little heritability. Party ID comes from exactly where you expect it to come from. It comes from your parents. It comes from your life experience. To the extent that it shows heritability it's largely through the heritability of ideology. So, for example, if your parents are liberal Democrats but, you know, you turn out to be sort of biologically a tilt conservative, then while you will start out, probably start out identifying as a Democrat, you may by the time you're 30 have drifted over and be an independent or possibly even a moderate Republican. So that what's being -- what's operating there is this underlying ideological tendency to make you more or less comfortable with a party.

I remember talking to a southern senator at one point, and he said, "This is a bunch of baloney. I know it's a bunch of baloney because I used to be a

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Democrat, and now I'm a Republican." I said, "So even though" -- he said, "How could it be biology? I have the same" -- "I have the same genes that I had 20 years ago when I was a Democrat, but now I'm a Republican." I said, "Well, I don't know. I guess maybe you just thought about it and decided to change your world of view." He said, "I didn't change. The damn party has changed." I said, "Okay. You're sure making my point for me here, and you're sure making it easy." It's like -- it really is a really good example. Right? He -- you know, he was comfortable enough for a while in the old Democratic Party because it had a very conservative southern wing, but he shifted over.

So in that sense your -- sort of your predisposition can affect your likelihood of staying in a party you inherit from your parents. It can have an affect when your parents are of different parties. I come from a mixed marriage. My mother was a Democrat. My father was a Republican. My brother is a Republican. I'm a Democrat. So you know how those things work. You got to pick your battles and pick who you're going to side with. But partisanship itself is largely a choice people make or a choice they don't make in the sense that they inherit it, so I -- in the U.S. at least party ideas is an identification. It is closer to your

religious affiliation than it is to most other traits.

It is not just a preference for one party over the other. People don't just say "I prefer the Democrats."

People say "I am a Democrat."

Q. Correct.

A. That wouldn't be true in Europe. Most
Europeans don't identify themselves as a party. They
identify which party they prefer or vote for or where
they are in a kind of party spectrum, but they don't
typically think of themselves as -- in the way that we
think of ourselves as Texans or Catholics or Americans.
So it's a -- it's a self-identification, and like most
self-identifications there's strong childhood effects,
and then strong adult choice effects. So what -- so
would underlying -- underlying ideological drive more in
a nonpartisan than a partisan? I think it would -obviously it would depend on a lot of things. There's a
social science answer for you.

My guess is it's probably more important -it probably is more important as the salience of
ideology goes up in the campaign itself. So I'll make a
bold prediction here. Ideology is going to become
increasingly important in nonpartisan elections, not
just because they're nonpartisan, but because ideology
is being injected into those elections, even in the form

of really frank partisanship. Right? So they just aren't -- you know, the old days when the median Republican and the median Democrat were both sort of good school people, right, the -- the school board elections were nonpartisan because mainstream Republicans and Democrats, although they were ideologically different, believed in quality, free public education, believed in good universities. Right? Those days are over. That just is not the case anymore.

O. Indeed.

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A. And so that's going to become -- you know, we don't -- go to a school board meeting. My God. I used to tell my students to go to school board meetings and federal court hearings because it would be inspirational. I sure as heck don't tell them that anymore. Federal court still is inspirational. You know, I know. I'm pretty careful telling them which judge. No, I'm not going to share that --

Q. Okay.

A. -- information at this point. So yeah. I mean, I don't know. I guess it's -- it's a good research question.

Q. Is it possible?

A. It is -- I think it is possible that -- I mean, quite frankly I think, yeah, it's -- and, again, I don't

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think it really -- I don't think you can really -- one of the things I think people misunderstand about our work is that people have this idea that if something has some genetic precursor or some physical brain precursor that it must be more important or less -- you know, less variable or something else. And I always try to tell students that, you know, the -- sort of the biology of human politics is like the -- is like the bayou current. You may not even realize bayous are flowing bodies of water. You could live right here a long time and not recognize the bayou actually flows in some direction, you know, unless of course we got a quarter of an inch of rain, in which case they're obviously moving. it's a very small, very weak force, but it's a constant And the day-to-day forces, the things that happen in our lives, the people that we respect, the jobs we take, those are big forces. They're powerful forces. They push us all over the place. And you just -- you can -- you can just look at the change in, you know, in the average Democrat or the average Republican's position on a whole host of things over time. Those social forces are powerful The power of your brain's biology is that it forces. works 24 hours a day very quietly in the background and slowly -- whatever position you get pushed to you --

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like a boat on a very slow -- I can predict the direction. All other things being equal you're going to come back toward that center of gravity that your biology gives you with regard to ideology. And that's about all. Just a weak force that tends to pull you -- it tends to pull you in a direction. So it's definitely not the strong force that people normally think of biology as being. When it comes to things like ideology, which are quite abstract, we're much too smart to be led around by that. Right? Because we're unlike other animals. We don't just think. We think about our thinking. That metacognition is a really distinctive trait, and it reduces, right, and it reduces -- that's why we have the ability to defer gratification in ways that are really remarkable.

Q. Some of us. Not necessarily me.

A. Yeah. Well, you know, I'm not doing such a great job myself. But just speaking as one person to another who can only defer certain kinds of gratification on a successful basis. But the point is, of course, right, that the -- sort of the ability to be aware of that, to be able to think about that really reduces the ability for -- for at least some drive.

So the other thing I think is really important is that politics is a -- is a part of what

makes us social animals. And that's really not the most fundamental part. Right? The really fundamental parts of us, the things that are survival driven are appetitive and aversive. Right? So our appetitive drives, our drive to sexually reproduce, our drive to get food, to get shelter, those basic drives are really powerful things. And those are things that we have — can struggle with controlling. But, you know, this sort of slight left-right predispositions are pretty modest drives, and therefore our ability to outthink ourselves is really pretty powerful in that realm.

Q. Fair enough.

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- A. Not to mention the effect of other people. Like any time I find myself drifting however slightly conservative I have my wife to correct my thinking and to point out that I'm drifting a little bit, a little bit in the wrong -- in the wrong direction, or my brother to point out that I'm just a complete idiot for believing pretty much anything, anything that I believe so --
- Q. Do you believe, or is it your position, that there's a genetic component to race?
 - A. Yes.
- Q. Could you talk a little bit more about that please?

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So, I mean, if you think about the -- obviously there's a -- there's a thing called race that's a completely social figment -- not a figment -- but it's completely a social creation. It's an intellectual It's an abstract category in which we bundle all kinds of things. But if you want to look at sort of what are the things that are most likely to create that bundle, right, there's a reason why we talk about people Right? There are gradations in the tint of people's skin, and that gradation of the tint of their skin is genetic. We can be tanned or untanned, but the amount of -- you know, all other things being equal, the proportion of external melanin in your skin is hereditary. Right? If both of your parents are black, you're likely to be black. Right? So in that sense the markers out of which we've created this -- this kind of sometimes reasonable and mostly unreasonable figment about racial categories, the markers themselves are -- are often genetic. because they're genetic they both provide an easy hook for saying "you're different than me." Right? see that you're different." And skin color is one of

the markers that's commonly used for that. Although

there are other more subtle markers that are used in

things like the caste system in India, for example.

Q. Sure.

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So there's a biological hook there. And then does that biological hook create all this other epiphenomena around it? It doesn't. But it does make that -- it helps make that epiphenomena more powerful out in the world. The fact that it's biological helps account not only its -- for some of its power, but also for some of its invidiousness. Right? Because you can't change the -- you're born a skin color. You're born tall, or you're born short. Right? So physical characteristics that are -- you're born with that are present at birth and are genetic are not things that you can change. And recognizing that you can't change them can be powerful in reducing things like racism, but they also can be things that trap people. Right?

If you're in the Dalit category, you're born into it, and you're trapped into it. And if you are -- you know, if your parents are black and you're lighter skinned than they are, you may be able to choose a different racial category for yourself. But for the most part that's not something people can do. So it isn't an act of will, and so things that are imposed on that basis are things that people can't control.

Recognizing that I think is really -- can be very -- can be damaging in the sense that it -- when people think of

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it as biologically different they think, therefore, the solution to that might be genocide. On the other hand, if you think it's not biological, then the solution may be reeducation. Right? So for a genocide -- I always tell my students genocide is wrong not because it's mistaken, although it is, it's wrong because it's genocide. Right? But reeducation -- the Chinese cultural revolution is wrong. It killed millions of people. It destroyed families and societies all on the false belief that you could completely change, you know, a college professor of art into a good farm laborer in their mind by just making them do farm labor. Right? So you can't change everything about people, whether it's what they think or the way they appear.

And the solution to that can be much more positive. And I think you see that with sexual orientation. Right? So in an era when people believe sexual orientation was a choice then people did not want people to make the wrong choice. Well-meaning parents, probably to protect their kids from making a mistake in that era, possibly even well-meaning lawmakers, tried to -- tried to regulate that. As the proportion of people who think that sexual orientation is something you're born with goes up the proportion of people who care about it goes down.

Q. I understand.

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A. So young people today believe that you're born into the sexual orientation, and so that expression "born that way," right, what about it? Right? "This is" -- "this is just" -- "this is who I am." And so I think as much as history has come down for the most part on negatively exploiting the characteristics, the physical -- heritable physical characteristics that we then bundle up into this fiction of race it's -- it's also possible understanding that those are just physical characteristics people are born with can -- can diminish that, as it does in the case of sexual orientation. And my hope is that the same thing is true with regard to ideology.

I tell my students, "I know you don't like" -- I mean, these are Rice students. So there are like two conservatives in the class, and they're not -- nobody is happy with them when they pipe up. And so I say, "Look, you're not happy with," you know, whatever it is they're saying here, "but you know what? Don't be so full of yourself. Don't be so proud that you're a liberal. You know, but for the grace of God or but from your genetics you could have been this person. How would you feel about that? And you conservatives, you're like looking down your nose at all these

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liberals. You know, just roll the dice. You could have been born a liberal." Right? "So if you just accept that they're born that way then you can stop wanting them" -- you can stop thinking that what they're doing is directed at you, and you can stop thinking that you're going to change them" because anybody who's spent any time discussing politics knows you're not going to change very many minds. You're going to make people mad, but you're not going to change -- you can change policy. You can find a way to make a policy work that fits somewhere in between. But if your way to change policy is change the mind; that is, change the fundamental ideological beliefs of your fellow legislator or your next door neighbor, that's a fool's errand. Right? It's just not going to happen. So if you just accept it -- I mean, most of my neighbors are conservatives and, you know, I'm not fans of their politics, but I -- you know, I don't have any personal animosity to them. You know, I put up my signs, and they put up theirs, and, you know, we stare at each other, but I don't -- most of them are what they are, and I -- that's just -- one of our graduate students, a very talented black graduate student is very, very conservative and very political. And he said, "It's hard. It is hard. It's" -- "in many ways,"

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he said, "it's harder now to be a black conservative than it is just to be black," right, that the -- the people just don't like it. They just think he's wrong, and they don't understand why he would -- why he would side with people who don't side -- who have animosity toward him because of the color of his skin.

Just a really tough -- another student who is very openly gay and very conservative, like Federalist Society, and he said the weird thing about being at Rice is nobody cared that he was gay, but everybody thought the fact that he was in The Federalist Society was like -- like people looked at him with open disgust when they found out he was in The Federalist Society. He said the funniest thing was that the other people in The Federalist Society because they were just young Rice people, right, they just said, "You're gay. I mean, obviously. You know, you're a smart person, and you are a moral person, so you wouldn't choose to be gay." Or it wasn't that they weren't, you know, openly prejudice against that idea. But they said, "You know, you're a good example." Right? "People don't choose to be gay because God knows you wouldn't choose to be. that's just the way you are. " And they were pretty accepting of him. But the people in the Gay and Lesbian Student Association never accepted the fact that he was

a conservative. At the end of the day that kept coming up. This was actually during that era of the W. campaign --

Q. Sure.

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A. -- when it was being openly exploited to drive voter turnout in Florida and Texas. And they just could not -- and he said, you know, until he took this class he didn't -- he didn't really have a response. He just knew that he believed in conservative things. And so he said, "This is" -- "this is what I tell people now. When people say 'how could you be a conservative,' I say 'I was born that way. This is the way God made me, and I can't help it.'" So, you know, I think it can be -- again, it could be a positive or a negative thing.

I don't think it's useful -- again, denying that there's a biology to sexual orientation I think is a very bad idea. Whether at a particular moment in time that's the -- that's creating prejudice. Right? You can think -- you know, one of the solutions if -- if in fact people are just born that way and they can't change it, then there's an obvious solution. If gay is wrong, then you just kill gay people. You could just do one of those little tests like Down's syndrome. "Wait a minute. My kid is going to be born gay. Let's, you know" -- "you know, you should just get rid of those

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people." And obviously that's not the way the modern world thinks, but you can see where that might occur to people if they believed it was -- if they believed it was biological. It might be easier from that perspective to be able to convince people that you could change your sexual orientation.

The same way that, you know, Protestants and Jews in Europe, like, you know, "Tell me kiss the Whatever. What is it you need me to do here? Like, I don't want to end up with my head on a pike." So -- so I think there can be -- there can be a downside to it. But at the same time I think denying -- denying that there are -- when you say that everything about race is nonbiological, including then the suggestion that there are not physical traits that have been used to build on top of that a racial fiction, then I think you -- you really put yourself in a bad position because empirically it's -- there are characteristics that are heritable. And if we're going to -- if by person of color you just mean someone with darker skin, that characteristic you're referring to is a -- very much a biological characteristic. It's something they can't change by will. It's something that they're going to pass on to their children. And so it's a -- it's a -you know, it is a -- it is a physical marker. And I

think that's -- that part of it is a reality. The rest of it not.

Q. Okay. Fair enough.

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A. Hence -- hence the fact that you got to -- when you look at ideology across race and ethnicity there are big party differences, but as Texas Republicans are discovering while there are party differences across Hispanics and non-Hispanics there are also some pretty big ideological mismatches between those categories.

And you can -- that can be exploited, or you can -- you know, you can ignore that.

W. wanted to -- well, W. very much wanted, you know, to make Hispanics majority Republican. I don't believe that that's shared by all the leaders of the current Republican party. But there's certainly -- there's a lever to do that, and the lever to do that is that, you know, Hispanics are conservative, moderate, or liberal at pretty much the same levels as everybody else in Texas, and -- and so if you stop poking them in the eye with a sharp stick they -- you know, they might actually come around and vote for a more -- for sort of a business conservative party so --

Q. My next question actually is that do you believe that there is a correlation between genetically determined ideology and race?

1 No. Α. 2 Do you believe that there's a correlation 3 between genetically determined ideology and ethnicity? 4 Α. No. 5 Okay. So the dispersion of ideology among the 6 ethnicities and races is roughly equal regardless of --7 Yeah, I don't -- I don't believe that. 8 don't -- I don't know that, so the -- the kind of scale 9 of study that it would take to establish that is -- it 10 would take a very large-scale study. It would have to 11 be -- it would have to be a global study because you 12 don't want to get people in particular settings. So I'm 13 not aware that anybody has actually done that on that 14 scale, but I've never seen anything to indicate that 15 there -- that those two things were associated, and nor 16 do I have any reason to believe they would be. 17 Okay. Just one last question I think, and then 0. 18 I'm going to confer with Barry and make sure I got all 19 the spaces. But I did want to ask you a little bit 20 about your book, if you don't mind. So you wrote a 21 book. What's the title of the book, sir? 22 Α. "Predisposed." 23 You wrote it with some other authors, and Q. 2.4 you've --25 Α. Yes.

Q. -- published with these authors before?

A. Yes.

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- Q. Largely on the topic of conversation we just had for about the last 25 minutes, correct?
 - A. Correct.
- Q. Okay. Now, I haven't read the entirety. But what portion of the book did you write?
 - A. Fairly little.
 - Q. Okay.
- A. So the actual writing, sort of the text is mostly the work of -- I'd say probably two-thirds the work of Kevin Smith and -- and first draft. The rest of it would be Hibbing. So mine sort of -- the book is -- pulls together a bunch of things that we've done research on, or that we've presented papers on, talked about and so forth. So I was actively involved at the -- at the research phase and served primarily as -- sort of in the early stages in outlining what the book was going to look like, what we were going to put in what sections. But the book itself was written almost entirely by, the text of the book, by Hibbing and Kevin Smith at Nebraska.
 - Q. But you endorse these findings largely?
 - A. Yes.
 - Q. Is there any part of the book that you don't

endorse?

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- A. I don't -- I haven't read the book since the book came out, so I -- I couldn't -- if you point me in the direction of something, I'll tell you if I endorse it or don't endorse it.
- Q. I'm not cherry-picking. I'm just wondering. I want to make sure that this is your opinion and are parts of your opinion.
- A. Parts of it are certainly my opinion but I didn't write most of it so there may well be stuff in there that I don't agree with. That's -- you know, there are values to team research, and there are -- there are disvalues. Right? Sometimes there are things in there that -- you know, that weren't what you personally believed but, you know, somebody feels strongly about them.
- Q. So I want to talk a little bit about the portion called "Different Slates." And specifically I want to talk about the racial portion of it or the -- that's the wrong way to say it. There's a portion of this chapter that talks about racial policies, specifically Affirmative Action. Do you -- are you aware -- do you remember that part of the book?
 - A. Yeah.
 - O. And I'm not sure I understand the conclusion.

And I want to -- I don't want to put this in the record.

This is my book. I love it. But I want to make sure
I --

- A. Well, we got that on the record. I'm happy. Do whatever you want.
- Q. I want to talk about the finding here. So if I could hand it to you.
 - A. Yes.

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- Q. If you could read it, review it, and tell me what's being said, specifically from the last paragraph of 163 to the first paragraph of 165.
 - A. All right.
 - Q. All right. Here you go.
 - A. Yes.
 - Q. So what is that part of the book talking about?
- A. So there are -- this is not our research, but there's a big body of research by Haidt and Graham and a whole research team that focuses on kind of dimensions of -- they call them dimensions of moral thinking that underlie dimensions of kind of political belief or political ideology. And John Jost, a political psychologist, picks up on some of this as well. So, you know, people have sort of placed different values on different kinds of things. Right? So one of the things some people feel very strongly about is that basically

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everybody should be treated the same, right, that we should be colorblind or race blind, whatever. And they -- and that's a -- for them that's a -- that's a strong principle. For other people in their -- their moral judgments are more connected to what Haidt's -- a category Haidt calls care or harm, which is people are motivated to respond on the basis of, you know, if -- if someone has been harmed, they -- they deserve care. And so that they look at it in terms of, you know, sort of responding in a -- what you might think of as maybe a more empathetic way.

But, again, you can -- there's a morality if you believe Haidt and Graham. There is a kind of morality and also a kind of a political belief centered around the issue about -- about care and harm. This is what Lakoff, who I think is mistaken, calls this maternal politics versus paternal politics. So the sort of politics of order and respect and hierarchy, he teaches those as sort of paternal politics. And maternal politics is more about this kind of care and so forth. So you can think about that in -- I think one of the areas is -- maybe it's quite clear -- is sort of in like sentencing guidelines. Right? So what should -- how should you sentence people? I mean, this -- one of my colleagues asked, he says, "I never understood why if

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you're going to pass a law to make something illegal why don't you define what the punishment is for it?" Right? "So if the punishment is the death penalty, it's the death penalty." Right? "And if not's the death penalty then I'd like to know what it is." He said, "Like if you rob a bank what is the appropriate punishment? I mean, if it's a year, make it a year. If it's 10 years, make it 10 years." So his idea is you take an action, the action has a consequence, and the consequence should be the same for everybody. He doesn't like the idea that some people get life in prison and some people get parole. He thinks that's just wrong, everybody should be treated the same.

And, of course, we've experimented with that in terms of judicial sentencing guidelines, and we know the havoc that can produce. Right? Because it just doesn't make any -- it doesn't make any sense to not treat people as individuals. This is what students of a bureaucracy called Bureaupathology, which is everybody wants -- when somebody walks into a Social Security office what do they want? They want to explain to someone what their particular problem is, and then they want the person to fix their particular problem on their particular basis. Like, "I know that this is supposed to take it here, or whatever, but I need it to

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be fixed now because" -- "you know, fix it." And what a bureaucrat does, of course, is they just follow standard operating procedures. So to some people that's the morality of large-scale organized standard operating procedures bureaucracies, is if you're the king of England or, you know, if you're a homeless person you're treated exactly, in the case of most people's belief, exactly as badly by the Social Security Administration regardless. Right?

And the other side of that is, of course, is people in different situations being treated equally, for example, being punished equally, or being served as poorly or slowly, is completely inappropriate because it doesn't at all match the circumstance they find themselves in. It's not equal when you treat everybody

for example, being punished equally, or being served as poorly or slowly, is completely inappropriate because it doesn't at all match the circumstance they find themselves in. It's not equal when you treat everybody equally when they're not in the same situation, when they haven't done the same thing, or when they're not capable of achieving the same thing or so forth. Right? So the question is do you want to -- you know, do -- are you inclined toward viewing treating difference differently as a moral hallmark or on treating everyone equally as a moral hallmark. And then the question is is one of those hallmarks in and of itself inappropriate or -- they are the way -- these are just -- these aren't things that we create out of philosophy. These are

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discovered things. They're found things. This is the way some people view the world. Most people are somewhere in between. But there are people who feel very strongly that sort of equality under the law means everybody is treated exactly the same way and there could be no -- no interference in that.

Other people feel very strongly that that's a really -- it's, you know, an immoral approach and, in fact, is born of a kind of indifference to people's humanity, which it may be. But some people are much less sensitive to the humanity of other people. Some people have very high levels of empathy. Some people have remarkably low levels. And that's not always because of the conditions they grew up in. also -- there's actually a syndrome called Williams syndrome in which people simply don't have the capability of separating their utilities from other people's. They'll -- they act only on other people's utility, no concern for themselves at all. That's -- I mean, in some ways that's amazing. Right? What a great kind of a person. But it's hardly neurotypical. People who are completely and unalterably selfish, which we often call sociopaths, are also not neuro -- thankfully not neurotypicals. But they -- but that is -- that is what they believe.

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Q. But these moral hallmarks -- I didn't mean to cut you off. I apologize. I think the point is is that they're -- it's biologically measurable, correct?

Α. Right. So there is an -- there is an underpinning to that that has to do with different Right? So, again, people who are -- who tend brains. to be selfish can learn to be less selfish, can -- but it's really about -- it's sort of on second thought. Right? You can learn -- because we have metacognition we can learn that our first impulse is perhaps not very generous or that our first impulse may be too generous. Right? And then we can learn to discipline that on our But the impulse is the impulse, and some part of that impulse comes from life experience, but some part of that impulse also differs biologically across individuals.

- Q. And I think that in that paragraph one of the impulses is a racial impulse, correct? By which I mean racist.
- A. So, I mean, you certainly could have a racist impulse.
 - Q. That's biologically determined, correct?
- A. I think there are -- there are features of biology that incline people to be -- again, I think you have to be careful about exactly what you mean by

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racist. But to be ethnocentric; that is, to be suspicious of people who are not like them on a whole lot of -- in a whole lot of ways, people that aren't like them on the basis of race, on the basis of nationality, the basis of language, on the basis of religion, on the basis of appearance, even on the basis of gender, right, sort of the -- you know, the sort of traditional patriarchal religion is very suspicious of having women anywhere around them, so those -- those impulses can vary across individuals biologically or the kind of things that socially build into those and create things like fascism can come out of those, can be encouraged by those. It doesn't mean that everybody who ends up falling into the thrall of that in a national situation, for example, is therefore sort of -- again, the environment has a big influence. And so the question of sort of how could Germany get this way or how could Japan get this way that was asked around World War II is really inappropriate in the sense that in -in one sense the Japanese could be that way because they were Asian, and for the Germans it's, well, I quess because they were Germany, I mean, because they weren't France. I don't know what. But, again, that was -- you know, that's -- that's inappropriate. But it is the case that some individuals,

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you know, take to -- take to those kinds of things very quickly, very easily, right, without much effort can fall into almost habitually think in ways that are clearly racist. And for other individuals it's less so. And the point here is not that. The point is that people that have a strong belief in the importance of equality -- I was involved in a case where the expert, the expert for the other side said Clarence Thomas was clearly a racist. I have trouble with that. He -- I mean, I happen to think he's a remarkably poor jurist, but that's really a separate issue. Right? I differ with him on all kinds of notions of not only judicial philosophy, but, I mean, you know, his habitual inactivity for a long time on the court, and he's now rediscovered his voice and -- my God. I hope to God he's back out of the hospital and fine because this will be just the kind of thing, have me like --

Q. I won't do that to you. I promise you.

A. -- ragging on Clarence Thomas and then he's dead. Like we find out, we come out here, he died recently.

Q. I promise I won't do that to you.

A. Yeah. So, you know, I'll say this. Again,
I -- I assume that Clarence Thomas is remarkable -- I
mean, judicial conservatism almost to the point of

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blindness is not unnatural. I mean, I think he is -you know, some people are on -- you see this on the autism spectrum. People on the autism spectrum are also incredibly literal so you have to be really careful because they -- a sign says something, they follow it, and everybody else says, "no, no, no, that's not" -it's like "no." Right? So that literalism, you see some of that in constitutional interpretation, right, that inability -- you know, when Scalia says, "Why wouldn't it mean exactly what it says, " and my question is, "Why do you think it means" -- "what makes you think that when people put something on a piece of paper it's literally exactly what they meant?" Right? Literalism is a -- is, again, a -- you can -- you can sort of -you can see where a brain that's to this side on the autism spectrum would be a natural host for a belief that all other things being equal probably people meant exactly what they wrote down. Whereas on this other side you'd say, "Well, people write all kinds of stuff." Right? "It probably doesn't tell us anything." So you can be -- you can believe that everyone should be treated equally. You can believe it's inappropriate to, as the current -- I think the current majority of the Supreme Court believes -- that -- that because race is a suspect category that anything that incorporates race

1 into decision-making, whether it's drawing district 2 lines or anything else, is suspect. Why is it suspect? 3 It's suspect because all other things being equal you 4 ought not to be using race in making decisions. 5 Now, the court recognizes that while that sets a high -- a high threshold for what a state can do, 6 7 for example, they recognize that there are conditions 8 under which you do something about that. Right? 9 that's -- we wouldn't have Section 2 without it. 10 wouldn't draw districts without that. On the other 11 hand, they also recognize that absent meeting that high 12 threshold that it is a suspect category, that in just 13 sort of regular legislation if you put race in there 14 that's inappropriate, and it ought not be in there 15 because everybody ought to be treated the same 16 regardless of race. So that -- the point of this 17 paragraph is just that you should not assume that people 18 who believe that everyone should be treated equally 19 believe that because they're fundamentally racist. 20 Among other things, it dilutes the importance of 21 understanding that people are fundamentally racist. 22 Right? 23 I think that's really one of my problems 2.4 with calling every difference in voting behavior, 25 however slight, and even if it occurs without regard to

the race of candidates, racially polarized voting, is exactly Brennan's concern, which is if that -- if you're going to label that, people are going to say "wait a minute. So you're saying the voters of Spring Branch are racist?" And the answer is "yes, some of the voters in Spring Branch are racist." Right? We're in Houston, There are racists here. But that's not -- it's not to say that the entire electorate is or even that the behavior of the electorate in those elections is the result of racism as opposed to something else, right, some policy concern or whatever. So I think if you don't preserve the possibility that individuals can believe in treating everyone the same without that being a code for racism then you diminish the real importance of what it means for someone to actually be racist because racists don't want everybody to be treated the same regardless of race.

O. Fair.

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A. They very much want people of a certain race to be treated differently. Right? So that's, I think, is a -- it's not only important to distinguish that in -- just in a general sense of thinking. Although, you know, nothing that we posit here is proven in any scientific sense. We never really quite get there in science. But I think there's good scientific reason to

believe that those are different states of thinking, that they are -- I would -- I would be willing to wager that in, given six months, 60 subjects in an fMRI machine, I could -- I could show you a brain signature that distinguishes everyone should be treated equally from racism.

- Q. Which presupposes that you could use the fMRI machine to determine if someone is a racist, correct?
- A. It means -- not certainly. But at some -- at some predictive value above random that you could separate -- you could have a -- you could take a set of people in which everybody said "this is what I think the law should be, no regard to race," and you could find the signal that separates -- I mean, I don't even -- honestly I wouldn't take your money this is so easy. But yes. The brain's signature for actual racism is really not hard.
 - O. How common is it?
- A. That we don't know. We don't know how common that is.
 - Q. Does it affect voting behavior?
- A. I would -- it's hard to imagine that racism wouldn't affect voting behavior.
- Q. So some part of voting is affected by racial politics and racial biological determinism, correct?

A. I don't believe in biological determinism, so I'm not going to say that. I really don't. I don't believe in environmental determinism, and I don't believe in biological determinism. It's just not a way -- as is true with voting. There are a host of factors that affect people's votes. Those factors may be very small factors for some people. They may be subconscious factors for some people. They may be factors that they override in metacognition. They may be factors that they don't override. They may be factors that are in fact their view of the world and their -- and the way they see things. Right? So they may be frank and open racist attitudes.

And I think you -- to understand -- to characterize the impact of that on a particular election system you have to have a sense of the degree to which that's actually playing out in the election system. And I don't think the -- sort of the current court system for doing that is perfect, but I think it's been pretty serviceable and done a pretty decent job. And I don't think it tries to -- my view of this -- and I know it's not universally agreed to -- but my view of this is that what's important is if the -- if the -- if the nature of the way that force is operating in the election system creates certain things that can happen and certain

things that can't, and those things disproportionately affect both the choice of minority voters and the opportunity of minority candidates, then that's the level at which you need to think about getting another election system, for example.

- Q. And do you have an opinion about whether that has been met here today or for SBISD? Have you ever advised them on that?
- A. Well, I don't think I'm supposed to tell you what I told the lawyers in terms of my advice.
 - Q. It depends on when. Right?
 - A. What?

- Q. It depends on when. Let's say before 2017 did you ever advise them that they had to consider adopting single-member districts?
- A. My recollection is that as early as the dismissal of the case in what I think was maybe the '90s on Gingles 1 my advice to the district was that as change took place over time they should think seriously about changing -- in whatever form they wanted to they should change their election system. And I was certainly, you know, happy to talk to them later about alternatives in terms of things like cumulative voting. So that's -- you know, my view has ben that that's -- that was prudent for the district to do. It's not that

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I knew for certain. No one ever knows what's going to happen in a lawsuit. But I think, you know, you can give advice as I do quite commonly to -- to districts about what's prudent. And I think that was my advice then. That's -- you know, I don't -- I personally don't think lawsuits are something that's good for school boards. So I know they have their own -- again, they have their own preferences. I'm not an opponent in any sense of at-large elections. I think there's a very good reason why at-large elections are not on their face illegal. I think there's a very good reason why groups like the Urban League still -- you know, it's still a very common form of election for small cities and municipalities, and it has -- it has benefits to it. On the other hand, I don't worship at the alter of -- I was at a school board meeting once and a fella in full uniform, about 80 years old, stood up and said, "I didn't fight in World War II and Korea for single-member districts." And so I didn't say anything because it's really rude to say things like that to old people. Besides, he had a -- just enough of a resemblance to my dad that I was afraid he might smack me if I said anything. But my answer to him would have been, "Yes, you did." Right? "The entire United States Government, every election to every office in the United

States Government is based on some form of single-member district whether it's the House or the Senate, the House which declared the war you fought in first and didn't the second. And we're so obsessed with it that even the president even though it's impossible to elect a single individual in a series of single-member districts we insist on doing it anyway and electing the president in each of our 50 states. That's how" -- "that's how obsessed we are as a country. The country you fought for is a country obsessed with single-member geography in a way the Europeans find just absolutely implausible and unaccountable."

So there's -- there's nothing magic about at-large elections, but -- and, again, I -- you know, I would much prefer the U.S. adopt a parliamentary system. I think we're at the breaking point for geographic representation. We're not going to solve the partisan gerrymandering problem short of just getting rid of the obvious problem, which is geography. Right? We don't -- we are not a geography to be represented anymore. That just doesn't make any sense. We once were, but we are now people to be represented. That's what proportional representation is for. It solves pretty much all the problems you can think of but --

O. We need a Constitutional Conventional to do

1 that, right, so --2 Yeah. And God knows -- I'll tell you what. 3 used to always scoff, you know, when people say "oh, 4 you" -- "you don't want a Constitutional Convention 5 because God knows what they would do." 6 God knows. 0. 7 But that's before -- that was before like the 8 last 10 years. And now I'm coming around to the view of 9 I don't think I want a Constitutional Convention because 10 God knows what they would do. 11 MR. GOLANDO: I'm going to take a small 12 break here, sir. 13 THE WITNESS: All right. 14 MR. GOLANDO: I really enjoyed the 15 conversation. I appreciate your time, but let me just 16 make sure that I have done my job correctly. 17 MR. CRAWFORD: Sure. 18 (Recess from 1:59 p.m. to 2:07 p.m.) 19 (BY MR. GOLANDO) Okay. We have just a few 20 I want to authenticate some documents and 21 add some documents into the record. And then I have 22 some questions based on this, if you don't mind. 23 All right. Α. So my first thing is I want to -- I'm going to 24 0. 25 hand you Exhibit 6, Expert Exhibit No. 6. I believe

1 this is a copy of your consulting agreement with SBISD. 2 Would you authenticate that for me, please? 3 Yes, that's correct. Α. 4 0. And that's your signature on the back page? 5 Α. It is. 6 Q. And that's a true and correct copy of that, 7 correct? 8 Α. Yes. 9 0. And do you have your contract that you had 10 before twenty -- before the litigation began, the one 11 where you -- that governs the OLS and the EI that you 12 provided to Ms. McBride? 13 I -- I might or I might not. I'm not sure 14 because I was doing a whole bunch of things with the 15 same law firm, so I don't know if we were just, you 16 know, working on different things or if there's a 17 separate, something that -- either an umbrella or an 18 actual contract, but I'm happy to look and see. 19 If you wouldn't mind taking a look. Q. 20 Α. Yeah. 21 I'd like to see it. And if you want to make 0. 22 the record more fulsome you have time to edit the 23 deposition or to provide any discovery. Discovery does 24 close on March 30th, but --

25

Α.

All right.

Q. -- whenever you get to it I'd be appreciative.

The next one is the article you provided that formed the basis of part of your report. It's -- I've labeled it Expert Exhibit No. 7. The title of it is "Republican Party of Texas Doubles Down on Local Elections." Is this a true and correct copy of that article, sir, that you relied on?

A. Yes, it is.

- Q. And I noted in your report that -- I don't think you made a reference to partisanship at all. And I also asked you if you had measured partisanship. I just wonder what role did this play in your report, sir.
- A. In the -- it sort of comes in in two places, but primarily with regard to the discussion of the -- the literature on the potential negative effects of switching to at-large elections. There's the discussion about how this can end up becoming -- itself becoming a political issue, and so that -- it's part of that notion that board elections are becoming increasingly politicized, not just partisan but politicized, and that this is sort of one of the things that may -- that may feed into that. So there's -- there's just a different -- or there's a different system for both identifying potential candidates and for advancing political campaigns for school boards and for

1 nonpartisan cities than there was 20 years ago. Reasonable. But your report doesn't cite to 2 3 this article, correct? 4 It's something that I looked at, and so I 5 brought it because I didn't remember if I had cited it 6 directly --7 Q. Okay. 8 -- or if I was just -- but it is something that 9 I looked at that, and that affected my thinking in 10 writing the report. 11 Thank you, sir. I appreciate it. The last one Q. is Expert Exhibit No. 8. It looks like what's called an 12 13 SSN memo. I'm not sure of the source of that. 14 titled "Do District-Based Elections for School Board 15 Help Minority Candidates Get Elected?" I'm going to 16 hand it to you. Could you authenticate it for me, sir? 17 Α. Yes. 18 Is that a true and correct copy of the article? 0. 19 Α. Is there a -- is there a page missing? 20 That's what we have I think. 0. 21 MR. ABRAMS: I think there was a third page 22 with a -- just one line on it. 23 MR. CRAWFORD: I believe those were your 24 originals. So let's see if we --25 MS. SHAKRA: This page or --

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1
                                No. I think that there was --
                   MR. ABRAMS:
 2
                   MS. SHAKRA:
                                Let me see.
 3
                   MR. ABRAMS:
                                I just remember there being
 4
     like a one sentence page.
 5
                   THE WITNESS: Yeah. I think this is the --
                   MS. SHAKRA: The one missing?
 6
 7
                   THE WITNESS:
                                 Is there a page that looks
 8
     like that?
9
                   MR. CRAWFORD: I don't know that we made
10
    a -- that made the copy.
11
                   MR. GOLANDO: Maybe it's in the back of the
12
     contract.
13
                                Did it get out of order?
                   MS. SHAKRA:
14
                   THE REPORTER: Do y'all want to go off the
15
    record, by the way?
16
                   MR. CRAWFORD:
                                  Sure.
17
                   (Discussion off the record from
18
                   2:11 p.m. to 2:12 p.m.)
19
              (BY MR. GOLANDO) I've handed you expert
20
    Exhibit No. 8. Could you authenticate it?
                                                  Is that the
21
     article you relied on in part for your report?
22
          Α.
              Yes.
23
              Okay. What was important about this article
          Q.
24
     for your report from your perspective?
25
              It's not particularly important because it's
          Α.
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not really research, per se. But I thought it was useful because it's a -- you know, this is part of a kind of a public policy synopsis kind of thing that sort of -- it's supposed to be helpful to policymakers. the researcher points out two things. One is he points out this idea that, you know, that may not always be -there might not always be a positive effect for Latino representation in the switch from at-large to single-member. And he also points out that his research shows that school board elections are partisan even if they're not explicitly partisan in the form of the ballot. And so I thought that not only does it sort of show those two things, but it -- it shows that it's being discussed by people not just in a research sense but in a kind of -- sort of the form of kind of public policy recommendation.

Q. And what is the source of this article?

A. I found it on the Internet, and it's a -- as best I remember, it's a site that has a whole series of things where people reflect on -- sort of produce brief summaries of kind of research findings that may be of use related to -- related to public policy.

O. And --

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A. I think it's San -- San Diego I think is where this -- where the person is.

1 And there's no data associated with this? 2 just summarizing previous reports, correct? 3 Α. Correct. And you're not sure of the source of that data 4 0. 5 or whether it has implications for SBISD, correct? 6 Α. Correct. 7 Okay. And finally, sir, if you could read this 8 The first paragraph right after the subject paragraph. 9 heading. 10 Α. Yep. 11 What does that say, sir? Q. 12 He's saying that the effect is mixed but one Α. 13 directional. That is, it can either help to close the 14 gap, or it can have no effect. 15 So at worst it has zero effect, and at best it 16 could actually increase representation, correct? 17 That's -- that's his summary. Α. 18 And the election change he's talking about they 0. 19 are single-member districts, correct? 20 I assume that's what he's talking about. 21 MR. GOLANDO: All right. Pass the witness. 22 MR. CRAWFORD: We'll reserve our questions. 23 (Whereupon at 2:16 p.m. the 24 deposition was concluded.) 25

1			CHANGES	S AND SI	IGNATURE			
2		WITNESS	NAME:	JOHN I	R. ALFORD	, PH.D		
3		DATE OF	DEPOSI	TION:	MARCH 24	, 2022		
4	PAGE LINE			CHANG	GE .		REASON	
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1 2 3	I, JOHN R. ALFORD, PH.D., have read the foregoing deposition and hereby affix my signature that same is true and correct, except as noted above.
4 5 6	JOHN R. ALFORD, PH.D.
7 8 9	THE STATE OF) COUNTY OF)
11 12 13	Before me,
14 15 16	consideration therein expressed. Given under my hand and seal of office this day of
17	
18	NOTARY PUBLIC IN AND FOR THE STATE OF
19 20 21	COMMISSION EXPIRES:
22 23	
24 25	

1	IN THE UNITED STATES DISTRICT COURT							
	FOR THE SOUTHERN DISTRICT OF TEXAS							
2	HOUSTON DIVISION							
3								
	VIRGINIA ELIZONDO, §							
4	Plaintiff, §							
	§							
5	v. § Civil Action No.							
	§ 4:21-CV-01997							
6	8							
	SPRING BRANCH INDEPENDENT §							
7	SCHOOL DISTRICT, ET AL., §							
	Defendants. §							
8								
9								
10	REPORTER'S CERTIFICATION							
	DEPOSITION OF JOHN R. ALFORD, PH.D.							
11	MARCH 24, 2022							
12								
13	I, John G. Rochelle, Certified Shorthand Reporter							
14	in and for the State of Texas, hereby certify to the							
15	following:							
16	That the witness, JOHN R. ALFORD, PH.D., was duly							
17	sworn by the officer and that the transcript of the oral							
18	deposition is a true record of the testimony given by							
19	the witness;							
20	That the deposition transcript was submitted on							
21	to the witness or to the attorney for							
22	the witness for examination, signature and return to							
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24	That the amount of time used by each party at the							
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 2
          Mr. Martin Golando - 03:39
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         Mr. Charles J. Crawford - 00:00
 4
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    deposition officer at the time said testimony was taken,
 6
     the following includes counsel for all parties of
 7
    record:
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 9
    Plaintiff;
10
         Mr. Charles Crawford, Mr. Lucas Henry, Attorneys
11
     for Defendants.
          That $ is the deposition officer's
12
13
     charges to the Plaintiff for preparing the original
14
    deposition transcript and any copies of exhibits;
15
          I certify that a review of the transcript was
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    requested.
17
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    related to, nor employed by any of the parties or
19
    attorneys in the action in which this proceeding was
20
     taken, and further that I am not financially or
21
     otherwise interested in the outcome of the action.
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1	Certified to by me this 5th day of April, 2022.
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		1	1	
A	account 32:1	130:14	air 121:10	65:25 67:6
a.m 1:19 26:7,8	58:7 84:11	adults 114:18	AL 1:7 172:7	69:9 70:3,19
Abbott 112:12	136:7	advance 20:11	albeit 123:10	73:18 74:11
112:21	accounting	advancing 89:25	Alford 1:12,16	75:4,23 76:6,7
Abernathy 2:14	78:23 79:9	165:24	3:3,13 5:2,6	77:9,21 82:23
ability 114:20	85:23	advantage 31:22	6:10 27:1	86:16,19 103:5
119:25 120:9	accounts 87:4	66:9	40:17 170:2	106:20,21,24
121:8,13	accuracy 48:9	advice 35:14,17	171:1,5,11	106:24 108:16
133:14,21,23	accurate 70:19	160:10,18	172:10,16	109:3 110:23
134:10	accurately 46:9	161:3,4	Alford's 103:12	111:2
able 27:17 59:11	achieving	advise 160:14	Alford,Ph.D	analyst 41:5
59:12 76:16,18	150:18	advised 36:10	3:11	45:19 102:4
77:5,6 122:4	acknowledged	160:8	allow 111:8	analyze 66:2,8
133:22 136:19	35:17 171:13	affect 129:15,17	allowed 12:17	66:11,15 83:3
142:5	act 19:11 33:15	158:21,23	allowing 44:2	analyzed 86:20
abortion 113:14	136:22 151:18	159:6 160:2	alter 47:13	88:23
117:1	action 1:5	affiliation 130:1	161:16	analyzing 46:21
Abott 88:8,23	146:22 149:8,9	Affirmative	alternative 17:1	androstenone
91:17	172:5 173:19	146:22	18:11 59:13	3:18 119:10,11
above-styled	173:21	affix 171:1	alternatives	120:2,10,12
1:18	actions 109:11	afraid 161:22	16:23 160:23	123:9 124:1,4
Abrams 2:4	active 115:1	African 94:21	Amarillo 17:4	124:24 125:14
27:17,23 92:2	121:17,20	age 116:6	amazing 7:4 9:8	126:14,23
92:6 166:21	actively 145:16	aggregated	151:20	Andy 37:2,3
167:1,3 173:1	actual 21:9	49:15,17,23	amended 27:23	Andy's 37:4
173:8	23:24 24:18	107:9,16 110:5	American 8:22	Anglo 22:1 56:2
absence 78:15	34:8 73:24	aggregation	111:23 112:6,7	56:4 61:21,21
absent 156:11	74:2 91:9	107:3	Americans	63:10,10 79:22
absolute 57:13	145:10 158:16	aggregations	94:21 130:11	102:14 103:3
absolutely 86:1	164:18	107:10	amount 82:8	103:22 108:11
90:23 93:1	add 68:4 101:10	ago 15:9 22:17	97:22 135:12	110:19
114:9 116:9	163:21	116:5 129:4	172:24	Anglos 41:11
162:11	added 108:17	166:1	amygdala	42:5,17 59:18
abstract 111:21	addition 22:20	agree 29:10	114:20,21	62:7 63:9
133:9 135:5	addressing	46:13,16 62:15	analyses 26:17	102:6
accept 139:2,16	17:24 41:21	70:4,4,5 71:10	29:10 42:11	animals 133:11
acceptable	89:5	71:25 73:1,9	46:17 100:18	134:1
103:7	adds 68:4	73:11,13 92:17	analysis 20:24	animosity
accepted 9:18	adjective 93:7	95:24 96:3	21:7,10,16	139:19 140:5
47:21 140:25	adjusted 86:22	97:14,15 99:10	22:6 23:1	annexed 6:19
accepting 97:6	87:4,8	99:12,15	24:18,19,24	answer 6:3 22:4
140:24	adjustment 79:5	146:11	25:1,20 26:10	25:2 26:13,21
access 45:7	administration	agreed 38:4	30:12,22 31:4	40:18 48:21,25
104:23	8:14 150:8	159:22	31:20 32:6	50:8 55:25
accompanied	adopt 162:15	agreement 3:23	38:10 41:25	57:14 58:5,23
122:9	adopting 160:14	164:1	47:24 48:24	69:11 73:7
	adult 118:7	ahead 113:4	49:3 54:19	103:15,16,17
	•		•	

				Page 170
106:17,25	165:1	aside 118:13,14	attendance 98:7	61:21
116:11 117:17	approach 23:15	asked 22:22,25	98:11	babrams@bla
130:18 157:5	47:8 151:8	24:14,15 26:9	attention 38:1	2:6
161:23	approached	35:14 38:16	65:3 84:8	bachelor's 8:13
answered 49:2	18:14	67:3 90:17	attitudes 3:18	back 7:17 9:5,11
answering 46:11	approaches 86:4	103:20 148:25	119:9 159:13	10:5,17,24
answers 5:25	appropriate	153:18 165:11	attorney 15:10	12:9,9,22
101:6	36:12,16 39:17	asking 5:22,22	25:5,14,15	13:10 30:21
anticipation	60:24 71:2	6:2 37:24 40:9	36:24 87:23	37:4 39:20
28:19	72:10 73:17,23	40:13 56:2	172:21	50:5 73:15,21
Antonio 2:10	75:24 86:13	99:19 102:24	attorney's 25:8	103:7 133:3
anybody 11:11	116:8 149:6	103:5,9	attorney-client	154:16 164:4
20:24 30:3	appropriately	aspects 111:20	25:4 26:12	167:11
45:21 109:16	23:15	asserting 45:16	28:16	background
139:6 144:13	approximately	assertion 97:6	attorneys 13:17	88:3,4 132:24
anymore 16:7	119:5	99:22	17:5 22:23,24	backwards
116:5,7 131:9	April 174:1	assess 59:9	22:25 24:25	70:12
131:16 162:21	area 10:18 33:24	assistant 68:17	25:3 29:25	backyard 114:2
anyway 69:12	39:3 45:4	associated 66:25	30:8,16 33:4,4	bad 56:1 141:17
162:7	60:18 63:22	144:15 169:1	103:6 173:8,10	142:17
Apgar 114:13	64:4 78:18	association	173:19	badly 150:8
apologize 25:11	89:7 98:14,15	38:19 140:25	Audrey 2:19	balance 41:17
88:13 91:24	106:5,6,9	assume 62:24	August 28:8	balances 53:10
152:2	113:18	97:2 124:12	authentic 13:8	Balderas 36:6
apparently	areas 44:16,17	154:24 156:17	64:16	ballot 45:7 66:18
19:17,18	45:2 89:15,24	169:20	authenticate	66:21 82:16
appeals 105:6	90:6 105:3,21	assuming 48:5	119:17 163:20	168:12
appear 137:14	113:19,20	59:20 61:24,24	164:2 166:16	baloney 128:24
appearance	148:22	76:17	167:20	128:25
153:6	Army 10:14	assumption 48:8	authors 144:23	bank 149:6
Appearances	arrayed 70:11	75:17	145:1	banners 11:24
3:2	art 137:11	assumptions	autism 155:3,3	bare 41:1
appeared	article 3:18,20	48:5,12 62:5	155:16	barely 109:20
171:11	4:1,4 88:15,18	85:13,15	available 59:13	barrel 45:6
appetitive 134:4	91:18,21 93:13	assured 19:24	Avenue 2:5	barriers 95:13
134:4	93:16,25 94:5	astonishing 68:6	average 119:5	Barry 2:4 14:20
applied 50:1	95:9 165:2,7	at-large 3:20	132:20,21	26:1 144:18
51:3	166:3,18	14:5 16:24	aversive 134:4	173:1,8
apply 28:20	167:21,23	22:21 65:6	avoid 18:22,22	based 25:2,4
77:25 112:2	168:17 article's 91:13	161:9,10 162:14 165:16	aware 9:17 21:4 24:12 54:10	28:16 40:19,20
appointed 95:1 appreciate 50:8	articles 14:9	168:8	133:22 144:13	41:4 42:1,10 48:18 88:18,22
65:17 73:7	65:1 73:22	Athletic 1:22	146:23	98:9 101:12
163:15 166:11	artificial 82:7	atmosphere	awkward 54:18	102:3,12,24,25
appreciated	artificially 11:22	63:14	awkwaiu 34.10	102.3,12,24,23
35:18	Ashford 1:22	attached 1:25	В	105:16 107:4
appreciative 6:4	Asian 153:21	attached 1.25 attempts 76:5	B 39:13 59:19	162:1 163:22
appreciative 0.4	1101411 133.21	attempts 70.5		102.1 103.22

				. I age 177
basic 48:8 85:10	beliefs 139:13	biased 85:7	20:10 22:3	Boyd 2:14
112:1 134:6	believe 14:15	Biden 118:15	25:18 33:5,6	Brady 43:9 44:1
basically 36:2 24:5 28:18		big 12:12 94:15	35:9,11 91:6	brain 109:6,7
38:10 98:2	38:20 39:10	132:17 143:6,9	94:17 96:18	114:3 117:25
113:8,15	41:6,10 48:13	147:17 153:16	97:1 131:4,12	121:10,11,21
147:25	48:17 49:9	bilingual 105:22	131:13 161:16	132:4 155:15
basis 26:11,16	50:1 51:24	bill 7:8 67:25	165:19 166:14	158:4
31:4 65:12	59:3 77:11	billing 67:10	168:10	brain's 132:23
66:12 118:19	91:19 92:5	binary 51:2	boards 161:7	158:16
118:20 133:20	93:16 95:22	biological	165:25	brains 112:25
136:23 148:7	96:8,9 103:10	118:19,20	boat 127:15	152:6
149:24 153:4,4	109:4 111:15	119:25 128:2,7	133:1	Branch 1:6
153:5,5,6,6	111:18 128:2	136:2,3,6	Bob 16:5 22:16	14:25 29:7
165:3	134:19,21	137:3 142:4,22	42:21 46:13,20	91:6,10 157:4
basketball 7:16	137:17 138:2	158:25 159:1,4	71:10 123:22	157:6 172:6
7:22	143:14,24	biologically	124:18 125:10	break 17:14
batteries 123:4,5	144:2,7,16	128:15 137:1	126:10 127:23	26:4,6 163:12
battery 125:15	148:13 151:25	152:3,15,22	bodies 109:15	breakdown
battles 129:21	155:21,22	153:10	132:9	120:15
Bayesian 23:14	156:18,19	biology 111:16	body 120:18	breaking 162:16
32:14	157:13 158:1	118:21 129:2	147:17	Brennan 39:20
bayou 132:8,11	159:1,3,4	132:7,23 133:4	bold 130:22	39:21,23
bayous 132:9	163:25 166:23	133:8 141:16	bomb 114:2	Brennan's 157:2
beat 7:24	believed 131:7,8	152:24	bonds 105:20	brief 168:20
becoming	141:9 142:3,3	birth 136:12	book 144:20,21	bright 19:15,24
165:17,17,19	146:15	BISG 49:18 70:3	144:21 145:7	55:2
began 102:19	believes 112:12	bit 10:21 33:11	145:13,18,20	bright-line
164:10	155:24	42:21 58:25	145:21,25	19:21,22
begins 92:6	believing 134:19	62:18 90:12,22	146:2,3,23	bring 13:18
behalf 36:13	belong 51:16	123:25 134:16	147:2,15	84:22 111:1
behaving 61:12	ben 160:24	134:17,24	border 113:25	Bringing 84:25
behavior 46:21	benefits 161:14	144:19 146:17	born 9:20 10:9	brings 110:23
47:11 52:8	Bernie 8:24 9:5	black 31:18,19	10:19 114:25	broad 100:20
60:20 63:17	73:21	32:6 40:23	114:25,25	broader 41:20
65:21 107:16	best 45:3 48:6	89:1,9 101:19	117:23,24	87:16
107:20 108:17	48:22 74:21	135:14,15	118:16 136:9	broadest 59:6
108:18 110:14	76:4 85:25	136:18 139:23	136:10,10,11	broadly 39:3
110:15 111:14	86:17,18	140:1,2	136:17 137:24	119:3 120:5
112:3 113:8	168:19 169:15	blame 46:13	138:2,4,11	brother 12:13
117:10 156:24	bet 9:22	Blank 2:4	139:2,3 141:12	12:18,19
157:9 158:21	better 27:19,21	blind 148:2	141:20,24	129:19 134:18
158:23	57:24,25 76:4	blindness 155:1	151:9	brought 166:5
beings 117:19	85:2 95:8	Bliss 10:24,25	bottom 67:20	build 122:1
belief 137:10	97:11	bloc 103:23	92:7 123:3	142:16 153:11
147:20 148:14	beyond 34:1	BLUE 48:6	Boulevard 2:15	building 11:5,6
150:7 154:6	101:10	board 4:4 17:20	bounced 10:20	11:23
155:16	bias 85:16,20	17:22 18:17	bouncing 80:2	builds 32:2
	<u> </u>	<u> </u>	<u> </u>	l

105:21	calls 148:6,16	cared 140:10	2:16	129:7 132:20
built 112:25	Calvin 7:18	career 44:16	celebrate 11:19	136:9,13,13
121:22	campaign 66:5	careful 52:13	center 133:3	137:10,13
bulb 121:11	82:15 130:21	131:17 152:25	centered 21:12	139:6,8,9,9,11
bunch 33:17	141:3	155:4	21:15 148:14	139:12,12
81:12,18	campaigns	case 5:9 19:11	central 112:13	141:20 142:6
128:24,25	66:12 105:7	20:1 22:10,11	116:17 117:11	142:23 160:19
145:14 164:14	165:25	23:2 31:13,17	117:14,14,18	160:21 169:18
bundle 135:5,8	candidate 21:11	31:18,23,24	certain 24:6	170:4
138:9	39:12,13 50:17	33:14 34:23	29:14 42:18	changed 11:21
burden 87:15	50:21,24 53:16	36:7,8 37:17	50:4 89:7	11:23 43:15
burdens 87:25	56:5 57:5,5,8	42:14 50:2	107:20 108:5,6	129:8
bureaucracies	59:18,19 61:20	58:9 63:12,12	122:4 133:19	changes 3:5
150:5	61:21,25,25	63:13,13,23	157:19 159:25	108:12,13
bureaucracy	62:1,6,17,22	64:5,6 69:7,19	159:25 161:1	116:24,25
149:19	63:15 74:23,24	75:19 79:7,25	certainly 16:4	170:1
bureaucrat	75:1,5,6,7,7,16	84:19 89:8	21:23 30:16	changing 160:20
150:2	75:18 76:17,18	96:12 102:5	38:16 40:22,25	chapter 146:21
Bureaupathol	76:19 77:14,15	104:9 107:12	42:8 44:4 46:8	character
149:19	77:22 82:5	110:17 131:9	52:20 56:12	121:25
burst 113:23	95:25 96:5,10	132:13 138:12	60:9 63:21	characteristic
114:9	96:11,13,15,22	150:7 153:25	71:4 83:21	60:22,23
Bush 34:23	97:4,5,9	154:7 160:17	85:3 101:18	111:10 142:21
118:24	103:24 104:23	cases 34:3 54:11	105:19 109:14	142:22
Bush's 118:25	108:9,10,11,13	67:17 87:8	110:9,22	characteristics
business 143:22	108:14,21,22	caste 135:25	143:15 146:9	83:2,11 136:11
<u>C</u>	candidates 4:4	castle 12:15	152:20 158:9	138:7,8,11
	21:25 22:1,2,2	categories	160:22	142:18
C 2:1 23:15	40:4 41:3 42:4	135:18 143:9	certainty 84:16	characterizati
31:23 32:2 calculator	42:17 59:11	category 30:17	Certificate 3:6	60:25
	61:3,19 62:16	46:2 106:12	CERTIFICA	characterize
127:10,15 California 65:5	63:25 75:2,13	122:22 135:5	172:10	60:18 159:15
88:23 95:16	97:1,8 102:14	136:16,20	Certified 172:13	characterizing
call 45:9 46:20	103:3 104:22	148:6 155:25	174:1	60:20
54:20 57:16	110:19 157:1	156:12	certify 172:14	charge 115:13
72:14,16,18	160:3 165:24	Catholics	173:15,17	charges 173:13
102:24 103:13	166:15	130:11	cetera 84:3,4,4	Charles 2:14
147:19 151:23	capability	cause 1:18	chair 43:9,19	26:14 29:16
called 23:14	121:20 151:17	causes 82:13	challenge 34:7	173:3,10
43:19 48:6	capable 79:4	85:18	34:16	checked 29:16
78:11 119:9	150:18	caution 86:13	challenging	chemical 120:14
120:5 135:2	captured 29:11	88:18 95:21	33:18,19 34:4	121:13,15
146:18 149:19	31:15 39:21 79:12	cautionary 84:6 84:7	34:6,15 84:10	122:2 chemicals 121:8
151:15 166:12			chance 95:25	
calling 57:25	card 171:12 care 137:25	cautious 85:4 90:6	97:16 109:13 change 45:17	cherry-picking 146:6
156:24	148:6,8,15,20	ccrawford@a	95:7,21 129:6	childhood
100.21	140.0,0,13,20	cciawioiu@a	95.1,41 149.0	Cimunoou

130:13	86:21 87:22	collected 103:1	community	169:24
children 142:24	97:21 103:4	collective 109:15	47:22 53:15	conclusion
Chinese 137:7	127:20 148:22	collectively	100:12	21:20,22 40:10
choice 62:17,25	clearer 76:8	109:21 110:1	compact 99:10	70:21 80:7
82:9 129:22,23	clearly 52:8 53:8	college 6:21	100:13,22	90:4 107:7
130:14 137:18	112:9 154:4,9	137:11	company 11:1	146:25
137:19 160:2	close 44:5,6,10	color 135:9,22	comparison 72:9	conclusions
choose 136:19	87:6,7 113:19	136:9 140:6	compat 59:25	24:21 38:23,25
140:18,21,22	125:22 164:24	142:20	77:3	condition 85:18
Christi 11:3	169:13	colorblind 148:2	compatible 60:1	108:17
cilantro 122:15	closely 112:23	combination	60:16 61:12	conditions 59:9
122:18,20	112:24	18:15	75:22,25 77:3	74:21 87:16
circumstance	closer 129:25	come 10:5,7	compensated	151:14 156:7
20:5 76:5	clothes 11:25	18:4,5 19:5	29:9	conductance
150:14	clue 45:16 94:11	20:15 39:24	competent 45:18	113:11,13
circumstances	112:1,2	42:25 43:11,20	competitive	confer 144:18
41:21 43:14	co-ethnics 63:15	50:4 128:10	81:21,22,25	confidence 31:7
54:7,14 87:17	code 157:14	129:18 133:3	complaint 27:23	72:19 74:8,13
citation 90:1	codes 31:25	138:6 143:21	27:24	confine 93:22
cite 88:8,25	coefficient 79:17	153:12 154:20	complete 23:1	Congress 35:21
89:22 166:2	cohesion 40:21	comes 74:6	122:11 134:18	congressional
cited 14:9 65:1	51:4,4,5,5,6,7	127:16 128:10	completely	19:18 34:15,17
89:22 119:8	51:21,22,23	128:11,11	11:20 70:5,5	35:12,13,13,22
166:5	52:2,4,7,16,17	133:8 152:14	109:10 117:21	35:25 37:9,20
cities 161:13	52:19,21,22,22	165:13	117:23 135:3,4	congressman
166:1	52:25 53:5,8	comfortable	137:10 150:13	36:17
citing 89:23	56:12,20,23,25	27:2 109:13	151:22	connected 148:5
Civil 1:5,23	57:3,25,25	128:22 129:11	completeness	consequence
172:5	58:7,15,21	coming 12:1	84:5	149:9,9
claim 80:4	75:5 102:2	16:11 18:6	completion	consequences
Clarence 154:8	110:18,18	32:20,21 49:14	11:20	109:10
154:19,24	cohesive 40:14	64:4 141:1	Complex 1:22	conservatism
class 47:16	41:8,9,11,18	163:8	component	111:24 112:11
121:23 138:17	50:17,21,24	commentary	134:22	154:25
141:7	51:1,2,10 52:5	38:9 69:8	composed 93:18	conservative
classification	52:6,8 53:12	COMMISSION	composition	113:6,7,17
120:1	53:22,25 54:3	171:19	82:21	114:6 116:1
clean 32:11,11	55:11,12,18	common 158:18	compound	117:15 128:16
116:11	56:5 57:2,8	158:19 161:13	81:17	129:13 134:15
clear 5:25 6:16	58:15 101:14	commonly	Comprehensi	139:24 140:1,8
18:24 19:3	101:18,25	135:23 161:3	102:15	141:1,9 143:17
39:4 49:4	102:6	communicatio	concern 95:18	143:22
52:24 54:3	cohesively 54:24	103:14	151:19 157:2	conservative,'
55:21 56:15	56:21 57:4	communism	157:11	141:11
67:4 70:8	cold 9:21	111:24	concerns 40:3	conservatives
71:24 77:8	colleagues 43:17	communities	105:13	115:5,6,9,11
79:11 82:23	44:5 148:25	88:20	concluded	115:17,21
	l	l	l	ı

				. 1
117:12 138:17	contracts 38:1	91:11,14,15	country 23:9	crazy 45:15
138:24 139:17	control 58:14,22	92:15 93:2,5	63:22 117:12	create 95:13
consider 160:14	84:24 90:20	95:23 96:1,6,7	162:9,9,10	115:22 135:7
consideration	109:8 113:25	96:8,11,20,23	county 6:17	136:3 150:25
171:14	136:23	97:14 98:20	104:15 107:5	153:11
considerations	controlling	99:2,13 101:21	112:19 171:8	created 135:17
20:10 59:7	134:8	102:17,22	couple 10:3 11:2	creates 159:25
considering	controversy	107:21,23	12:19 59:15	creating 141:18
16:23	89:2	109:1 110:19	65:1 87:22	creation 135:4
consistent 21:23	convention 43:4	119:13,20	93:14	credibility 26:18
30:25 31:10	163:4,9	123:5,11,12,15	coupled 95:11	Creek 6:16
72:3	Conventional	123:20,21	course 6:17 8:21	critical 17:14
constant 132:14	162:25	124:5,7,14,16	47:3 52:1 54:5	31:14
constitute	conversation	124:24 125:1,8	76:24 109:15	criticism 77:2
100:14	145:3 163:15	125:9,16,17	115:7 119:7,15	critique 38:11
constitutional	conversations	126:5,8,16,17	132:12 133:21	crux 48:19
155:8 162:25	43:3	127:5,12,21,22	149:14 150:2	Cruz 62:25 63:4
163:4,9	convince 142:5	130:5 134:15	150:10	CSR 1:20 174:5
constrain 93:22	copies 13:24	145:4,5 152:3	court 1:1 19:19	cue 110:10,13,17
construction	173:14	152:18,22	27:1 29:5	110:25
11:1	copy 64:14	158:8,25 164:3	35:12,14 36:12	cultural 137:8
consulted 13:14	164:1,6 165:6	164:6,7 165:6	36:23 37:1,10	cumulative 17:2
14:8	166:18 167:10	166:3,18 169:2	37:14 51:13,14	17:4,13,15
consulting 3:23	cores 98:9,10	169:3,5,6,16	52:11 54:1	22:20 160:23
11:3 164:1	Corpus 11:3	169:19 171:2	55:12,18 78:9	current 16:24
contact 21:2	correct 5:11,12	corrective 90:12	119:23 131:14	39:23 63:14
contacted 25:19	8:12,15,16	correctly 49:13	131:16 154:14	98:10 100:4
43:10	10:10 13:2,3	77:11 87:12	155:24 156:5	132:8 143:15
content 114:9	14:16 24:4	98:22 119:12	159:18 172:1	155:23,23
contents 26:10	25:22 26:12,13	163:16	172:23 174:6	159:18
30:24 102:21	27:7 32:15	correlated 123:9	court's 19:14	currently 26:13
contest 91:8	33:9,10 38:15	124:23 125:14	courts 39:2,3	54:11
contested 75:15	53:16,17 60:10	correlation	covered 33:2	curvilinear
contests 77:22	60:15 62:12	73:17 78:11,12	Crawford 2:14	78:19
context 38:11	64:1,8,18	79:1,7,14	13:14,21,24	cut 113:3 152:2
81:2 82:2	65:12 68:13,15	80:14,14,16,17	25:2,10,12	CVAP 32:1,1
85:20 90:3,10	68:21 69:2,13	80:19,19,20,24	26:2,5,11,23	91:20 92:13,13
110:11	69:14 70:23	84:23 85:1	28:15,22,24	92:13,25 93:3
continue 95:22	71:7 72:1,4,5	143:24 144:2	30:3,9,16	98:14,16 99:13
continued 9:3	74:14 76:23	correspondence	40:15 41:13	100:4
continues	77:12,23 78:1	78:17	68:11 69:7	
126:14,24	78:2,6 82:14	corresponds	96:24 99:16	D
continuous 51:3	82:17,25 86:23	78:22	100:8,23,25	D.C 11:2 44:8
contract 13:17	86:24 87:23,24	counsel 14:18	103:12 163:17	dad 10:12,14
14:3,3,10	88:1,2,5,6,9,20	16:21 29:8,17	166:23 167:9	161:22
37:24 164:9,18	88:21,24 89:12	69:4 173:6,17	167:16 169:22	Dairy 1:22
167:12	89:13,18 91:10	counties 107:4	173:3,10	Dalit 136:16
	l , , , , , , , , , , , , , , , , , , ,		<u> </u>	

				. Tage 101
dam 11:20	debate 15:22	128:17 129:1,4	170:3 171:1	Diego 168:24
damaging	39:23 117:11	129:18,20	172:10,18,20	differ 117:19,19
136:25	deceived 78:20	130:4 131:3	172:25 173:5	117:20 154:11
damn 129:7	decent 159:20	132:20	173:12,14	difference 32:7
dangerous 115:7	decide 76:16	Democratic	depositions 50:5	56:3 111:2
darker 142:20	decided 129:6	34:12,16 36:17	describe 53:11	116:2,2 119:3
data 32:8,19	decision 35:17	107:6,8 129:12	56:11 119:22	119:25 120:3
33:8,9 45:18	55:8,19	Democrats 63:7	122:9	150:20 156:24
48:18,20,22	decision-maki	63:10,10	describes 107:19	differences
49:6,15,16,18	156:1	128:14 130:3	120:22,25	114:24,24
49:20,21 64:22	decisions 109:7	131:6	description 3:9	143:6,7
64:24 65:19	112:13 156:4	demographer	78:4 171:12	different 8:8,10
66:6,15,25	declared 162:3	17:11 97:23	deserve 148:8	10:22 18:15,16
67:9 68:17,18	deducing 73:23	demographers	designed 105:23	18:16,17 32:4
69:23,25 70:2	defeat 56:22,22	17:7 20:20	destroyed 137:9	42:4 54:10,12
71:22,23 73:24	57:4,8 103:23	21:3	detect 119:25	54:22,22 63:3
73:25 74:3,19	defeated 62:2	demographic	120:21 121:13	70:7 74:20,21
81:10,11,11	defend 15:10	49:18	121:15 122:1,6	81:12,20 84:21
86:4,6 88:22	Defendants 1:7	demography	detected 122:11	87:9 89:5
101:12 102:4	2:13 172:7	102:4	detection 3:18	92:18 93:15
102:12,25	173:11	demonstrate	119:9 120:10	102:14 103:3
106:16 107:1	defending 37:10	71:11	determination	115:7 118:1,3
169:1,4	defense 114:6,8	demonstrates	40:17	118:6,17
database 32:14	115:13	71:2,16,23,24	determinative	122:24 129:17
Date 170:3	defer 133:14,19	denied 104:22	63:16 128:4	131:7 135:21
174:5	deferring 26:14	denying 141:15	determine 38:14	135:22 136:20
dated 3:13,15	define 59:4,5	142:12,12	49:7 59:23	137:1 146:18
dates 16:20	91:17 94:5,8	department	158:8	147:23,24
daughter 44:7	149:2	43:7 45:25	determined	150:11 152:5
daughters 47:11	defined 54:22,25	115:13	143:25 144:3	158:1 164:16
David 43:9,9	56:23 75:7	depend 48:11	152:22	165:23,23
44:1	defining 92:10	130:17	determining	differently 40:5
day 1:19 19:5	92:11,12	dependent 78:24	58:4	40:6 77:5
37:4 47:10	definitely 20:1	79:18 81:1	determinism	116:12 150:21
91:9 109:21	27:7 109:24	depending 17:17	158:25 159:1,3	157:20
117:23,24	133:6	56:24 63:21	159:4	differs 152:15
118:3,6 132:24	definition 39:10	72:11	develop 46:3	difficult 58:9
141:1 171:11	51:8,15 56:14	depends 62:22	developed 78:12	110:6
171:15 174:1	59:21 86:5	80:12 83:23	developing	dilutes 156:20
day-to-day	93:24	101:17 160:11	46:11	dimensions
132:15	degree 80:25	160:13	deviation 98:5	147:18,19,20
days 27:25	105:17 114:20	deposed 5:18	dice 139:1	diminish 84:23
112:21 131:2,9	159:16	deposition 1:11	dichotomies	84:25 138:11
dead 154:20	deliberately	1:16 3:11 5:13	55:3	157:14
deal 43:10 77:5	65:9	13:2 14:21	dichotomy 55:1	dinner 44:7
dealing 31:13	delve 90:21	16:10 26:25	55:2	dinosaur 22:15
death 149:3,4,4	Democrat 61:3	164:23 169:24	died 154:20	direct 18:13
	•	•	•	•

				. Tage 102
21:2 22:20	139:7	58:16,20 93:25	Donald 118:12	drift 66:18 82:16
116:16	discussion 16:25	94:1,6,8,15	door 139:14	drifted 128:18
directed 106:3	24:12 69:10	95:7 97:19	Doubles 4:2	drifting 134:14
139:5	90:3 92:5	98:7,14,16,18	165:5	134:16
direction 19:4	165:14,16	99:5,10 100:6	doubt 49:13	drive 108:14
40:24 57:2	167:17	100:14 101:9	Down's 141:23	130:15 133:23
70:17 72:5	discussions 21:1	105:20 106:1,1	downside	134:5,5 141:5
128:6 132:11	disgust 116:13	111:5 156:1	142:11	driven 108:19
133:2,6 134:17	124:1,4 140:13	160:18,25	dozen 67:17	134:3
146:4	disgusted 113:5	162:2 172:1,1	68:2	drives 108:13
directional	113:10	172:7	Dr 5:6 14:8 27:1	134:5,6,10
169:13	disgusting	District-Based	38:7,11 40:17	driving 79:24,25
directly 166:6	113:22	4:4 166:14	40:20 41:25	drove 45:15
disagree 48:23	dismissal 160:17	districting 16:22	43:9,18 48:13	duly 1:17 5:3
50:3 69:23	dismissed 15:14	districts 17:10	48:17 49:9	172:16
70:1,6	15:23	17:21 19:18,23	50:1 64:25	durable 111:9
disagreements	Disney 11:18	33:25 34:2,17	67:2 68:23,24	
49:24	dispenser	37:5,8,22	69:8,9,12 73:1	E
disappeared	116:19	88:19 89:1,9	77:21 87:14	E 2:1,1
112:6	dispersion 144:5	89:16 93:18,23	89:24 90:10	earlier 28:3
discipline	disproportion	94:5 95:8 98:9	101:11 103:12	52:15 89:4
152:12	160:1	98:11 105:22	draft 145:12	108:8
disclosable	dispute 39:19	156:10 160:15	drama 6:25 7:2	earliest 18:23
29:15	53:5	161:3,19 162:6	dramatic 93:17	early 15:8 28:6
disclose 25:3	distinct 22:13	169:19	dramatically	38:20 66:24
disclosed 33:1	distinction 70:9	disvalues 146:13	93:17	78:24 105:24
disclosing	distinctive	DIVISION 1:2	draw 15:24	145:18 160:16
107:11	133:12	172:2	18:24 19:1,6,6	Earnest 91:8
disclosure 67:22	distinguish	divorce 43:15	19:7,8,12	earphones
discovered	110:23 157:21	49:22	35:10,12 36:9	113:24
151:1	distinguished	doctrine 28:17	37:13,14 91:12	easier 57:10
discovering	39:4	28:22	98:16 101:8,8	142:4
143:7	distinguishes	document 3:23	107:7 156:10	easily 113:5,9
discovery	158:5	171:12	drawer 98:19	114:7,12,17
164:23,23	distributed	documents	drawing 17:9,10	115:1 154:2
discrete 76:6	118:21	13:11,13,15	33:25 34:1	easy 17:19 78:19
81:10 120:18	distribution	14:7,13 30:4	37:5,7,22	129:9 135:20
discriminated	45:5	65:12 163:20	58:19 99:2,19	158:15
105:2	district 1:1,1,7	163:21	156:1	eating 113:12
discrimination	15:7,11,25	doing 11:3 16:8	drawn 20:17	ecological 8:25
104:6	16:22,23 17:9	16:10 17:7,11	37:10,11 38:5	23:3 46:17
discuss 33:5	18:19,20,25	33:24 44:21	98:23 99:3,5	65:24 73:18,24
123:2	19:2,7,8,8,12	45:5,17,21	99:19 100:16	76:9 106:15,16
discussed 69:5	20:17 22:18	68:1 85:23	dream 35:21	106:24 107:9
168:14	24:12 29:8,17	112:19 133:17	47:6	107:19
discusses 123:4	34:4 37:10,11	139:5 159:19	drew 35:11,12	edit 164:22
discussing 21:3	58:9,10,11,14	162:7 164:14	36:6	education 48:15
	l	<u> </u>	I	I

	-		-	. Tage 103
105:3,23 131:8	61:1,2,7,8,11	Elizondo 1:3 5:9	51:24 68:10	establish 100:6
effect 65:6 90:6	61:14 66:2	91:7 172:3	116:15 157:8	144:9
93:18 106:18	70:2,2 79:25	email 2:6,11,16	161:24	establishes 60:2
107:7 134:13	80:1 81:14,17	14:2	entirely 15:4	estimate 23:21
168:7 169:12	81:22,24,25	empathetic	62:22 99:22	74:2,2,3,6 85:6
169:14,15	82:4,24,24	148:11	109:7 145:21	100:4
effects 130:13,14	83:2,7,9,10,11	empathy 151:12	entirety 14:12	estimated 85:5
165:15	83:12 91:9	empirical 106:8	103:11 145:6	93:17
efficiency 85:16	100:18 102:1,4	106:9	entities 33:23,25	estimates 85:11
efficient 85:18	102:9,9 105:9	empirically	34:2 39:5	85:17
effort 154:2	108:7 128:4	142:18	entitled 3:18,20	estimation 32:2
efforts 106:2	159:15,17,24	employed	3:23 4:1,4	32:3 49:23
EI 21:16 23:13	160:5,21	173:18	entity 33:21	85:21
23:16,24 24:18	161:13,25	employees 46:8	entryway	estimator 48:7
25:20 30:5,22	169:18	employer 103:19	116:17	85:7,16,19
30:25 31:23	elections 3:20	employment	environment	estimators 85:12
33:9 64:8	4:4 17:1,3,4,13	41:6 69:6	95:20 115:22	et 1:7 84:3,3,4
65:25 70:23	17:15 31:10	105:3	118:16 153:16	172:7
71:6 82:23	38:14,15,21	enable 103:23	environmental	ethnic 75:18
102:17,19,21	40:14 41:1,12	encouraged	159:3	ethnically 75:14
110:17 164:11	42:3,5,15,16	153:13	epiphenomena	ethnicities 144:6
eight 110:3	60:21 61:15,22	ended 15:23	136:4,5	ethnicity 61:19
Eighty 56:7	62:2,21 63:11	33:25 43:13	equal 98:13	75:12,20
either 14:8	63:20 65:6,10	44:17	133:2 135:12	108:14,22
15:14,23 16:10	66:3,25 67:1	endorse 49:11	144:6 150:15	110:13,17
18:16 21:2	70:21 73:11	49:12 145:23	155:17 156:3	143:5 144:3
30:15 31:17,20	74:20,20,22	146:1,4,5	equality 151:4	ethnocentric
32:13 43:23	76:15,16 81:18	ends 45:3	154:7	153:1
54:25 61:11	81:20,21 82:2	153:14	equally 150:11	Europe 130:6
63:15 116:22	83:13 88:23	engage 36:3	150:12,16,22	_142:8
120:20 122:18	91:7 95:21	engagement	155:22 156:18	Europeans
164:17 169:13	96:23,25 97:2	15:3 16:16	158:5	130:7 162:11
elect 59:11 162:5	101:14 102:7	37:23 40:16	equation 47:13	evaluate 47:18
elected 4:5 22:3	102:13 103:2	41:6,14 42:4	equations 83:21	evenly 57:7
94:17,22 96:1	105:7 130:23	99:17	equivalent	event 81:11
96:6,17,23	130:25 131:5	England 150:6	122:17	events 81:12
97:4,7,8,10	157:9 161:9,10	enjoyable	era 8:4,4 16:7	everybody 11:24
105:12 166:15	162:14 165:6	106:13	22:15 137:17	35:20 39:22
electing 162:7	165:16,19	enjoyed 163:14	137:21 141:2	46:7 81:24
election 4:2	166:14 168:10	enormous 87:21	eras 22:13	140:11 143:18
17:20 18:11	electorate 157:8	enroll 94:10	errand 139:15	148:1 149:10
21:18 33:18,20	157:9	enrollment 94:3	error 48:4 84:3	149:12,20
35:23 38:18	elevated 120:16	94:7	84:24	150:15 151:5
41:4 49:20	eligible 91:13,17	entailed 29:22	essence 57:12	153:13 155:6
51:9 59:24,25	92:11 95:5,15	entering 106:11	essentially 23:6	156:15 157:16
59:25 60:5,8,9	95:16	enters 54:5	23:15 38:7	158:12
60:11,16,21,23	eliminate 108:5	entire 37:12	65:8	evidence 40:21

				. rage 101
40:22,25 87:13	165:4 166:12	171:19	159:11	50:15
88:1,5 89:24	167:20	explain 78:8	factor 63:16	favoring 41:2
exact 32:5 36:22	exhibits 3:8	81:6,23 82:5,6	110:25	favorite 109:16
exactly 16:20	173:14	82:13 149:21	factors 63:22	favors 112:16
24:6,6 29:21	existence 60:1	explained 79:18	81:6 82:18,19	fear 114:23
35:22 36:18	expect 32:16	81:15 82:8	110:24 159:6,6	features 61:7
39:21 47:16	64:3,6 74:7	explaining 79:2	159:7,8,9,10	152:23
49:21 52:12	82:6 128:10	81:16 84:9	159:11	February 3:13
58:1 70:3 83:7	expensive 20:8	110:25	facts 19:25 50:2	federal 1:23
93:20 128:10	experience 9:21	explains 81:9	77:7	45:6 131:14,16
150:7,8 151:5	19:7 39:1 41:4	explanatory	fair 6:20 7:20	Federalist 140:9
152:25 155:10	42:2 48:14	82:3	22:4 27:5	140:11,13,15
155:13,18	57:15 62:21	explicitly 168:11	32:23 37:15	feed 165:22
157:2	100:16 101:12	exploited 141:5	55:6 58:24	feel 27:19,21
exaggeration	102:3,12 103:1	143:10	61:20 62:14	47:16 115:21
47:7	103:9,11,22	exploiting 138:7	64:2 78:3	138:24 147:25
examination 3:4	114:23 117:21	exploiting 138.7	91:12 94:16	151:3,7
5:4 172:22	128:12 152:14	expressed	96:9 97:3,16	feeling 114:23
example 32:1	experiment	171:14	99:7 103:18	feelings 19:14
39:9 40:20	116:20	expression 138:3	106:11 107:17	feels 146:15
42:13 47:11	experimented	extensive 88:3	126:6 134:12	fell 43:25
55:16 60:14	149:14	extent 16:16	143:3 157:18	fella 9:9 161:17
61:1 107:3	expert 3:13,15	38:8 40:16	fairly 79:1	fellow 139:13
108:7 118:2	3:23 5:10	41:14 69:10	115:24 145:8	felt 27:20
128:14 129:10	29:20 33:14,17	70:11,15 85:9	fall 28:2 30:17	female 107:5
135:25 140:21	36:7 38:18,19	85:12 100:23	51:23 154:3	females 120:17
150:12 153:15	38:23,25 40:13	128:12	fallacy 106:15	fiction 138:9
156:7 160:5	41:7 42:2	external 135:13	107:9	142:16
exceed 38:6	44:23 45:9	extraordinarily	falling 153:14	Fifty 58:13
exceeds 41:14	46:14,20 48:13	9:10	false 137:10	fight 26:22
99:16 100:25	55:10,10,24	extremely 45:18	familiar 9:3	161:18
Excel 30:14,19	62:15 64:18	80:22	46:23 72:19	
excellent 44:14		eye 143:20	79:3	fighting 23:9 figment 135:3,3
	67:23 69:15,24	eye 145.20	families 44:6	135:18
exchange 14:2 excited 9:23	71:11 99:18 101:2 102:4		118:23 137:9	figure 28:4 70:6
125:25	101:2 102:4	face 161:10		91:22 92:2
exclusion 17:16		facilities 105:21	family 119:2 fanciful 12:7,8	
	119:16 154:7,8	fact 9:17 20:17	·	93:15,19,23
17:19 18:1	163:25 165:4	42:15 51:3	fancy 11:25	109:20
executed 171:13	166:12 167:19	57:6 58:19	fans 139:18 far 93:4	file 30:19 filed 15:6 24:6
exhibit 3:10,12	expertise 42:11	60:4,5 74:12		
3:15,17,20,22	102:25 104:9	75:18,20 78:21	farm 137:11,12	24:10,20 27:9
4:1,3 5:1 13:7	106:3	79:13 84:15	fascinating 8:6	27:21,24,25
28:25 64:15,20	experts 39:10	87:5 95:5	117:3 122:14	28:5,19 36:1
69:16 88:12	45:13 51:12	136:6 140:11	fascism 153:12	filing 24:3
91:23 119:16	Expiration	140:25 141:20	fashion 61:12	fill 116:21
126:14,24	174:5	143:4 151:9	father 129:19	final 88:7,17
163:25,25	EXPIRES	173.7 131.7	fault 5:22 50:15	finally 11:4
L	=	-	-	-

	-	-		. Tage 103
169:7	flip 116:20	forms 70:7	173:20	genocide 137:2
finance 66:5	floats 105:20	109:3		137:4,5,7
financially	Florida 34:16,18	Fort 10:24,25	G	geographic
173:20	37:17,19,21	forth 9:5 111:6	G 1:20 172:13	162:16
find 23:9 28:11	141:6	145:16 148:21	174:5	geographically
47:12 57:10	flowing 132:9	150:18	Galveston 6:17	100:13,22
83:13 91:24	flows 132:11	fought 162:3,9	gap 169:14	geography
108:8,8 122:21	fMRI 158:3,7	found 140:13	Gary 23:5,7,7	21:13,15,19
126:13,23	focus 22:20	151:1 168:18	46:4	162:10,19,20
134:14 139:10	focuses 147:18	foundations	gather 106:16	geometrically
150:14 154:20	focusing 22:17	46:18	gay 113:14	99:8
158:13 162:11	folks 119:20	four 18:8 22:17	116:25 140:8	George 43:18
finding 71:4	follow 150:2	110:3	140:10,16,19	118:24,24
123:15,18	155:5	frame 18:5,7	140:22,24	Georgia 10:2,3
124:7,9,11,21	followed 114:16	France 153:23	141:21,22,24	43:1,2,7,12
125:1,3,18	following 90:25	frank 131:1	gender 106:18	germane 83:7
126:7,18 127:3	172:15 173:6	159:13	106:23 107:7	Germans 153:21
127:21 147:6	follows 5:3	frankly 109:4	153:7	Germany
findings 24:23	172:25	131:25	gene 8:5 121:22	153:17,22
24:25 68:14,16	food 116:14	free 114:10	122:1	gerrymandering
73:2,10 89:6	122:19,20	131:7	general 59:15	162:18
120:7,8 123:3	134:6	frequently 57:15	61:2 65:5	getting 9:23
123:7 145:23	fool's 139:14	friends 44:6,6	102:1 108:7	20:7 48:19
168:21	Foolish 9:19	front 44:2	111:2 113:6,7	52:14 55:9
fine 50:12 54:16	force 55:13	Frost 34:13,22	117:1 157:22	56:10 57:5
154:16	132:14,15	35:1,1,25	General's 36:24	68:21 107:1,2
finish 6:2	133:5,7 159:24	full 6:9 20:6	generally 42:14	108:19 125:22
firm 30:4 164:15	forces 132:15,17	49:2 85:5 91:1	46:18 47:21	125:22,25
174:6	132:18,22,23	126:22,22	50:9 55:22	127:18 160:4
first 5:3 6:21 9:1	foregoing 171:1	138:21 161:17	69:22 71:12	162:18
9:2,12 23:21	171:13	fully 31:3	72:3 101:13	giant 75:3
36:19 43:8	forgave 44:1	fulsome 164:22	102:7 103:3	ginger 120:23
59:20 69:22	forget 109:19	fun 106:12	generate 73:17	Gingles 15:22
106:14 111:20	form 45:7 65:12	function 84:17	generates	16:1 18:24
126:22 145:12	66:12 83:8	functional 56:14	109:18	19:2,7,8 20:7
147:11 152:10	96:24 99:20	121:18	generous 152:11	22:16 41:19,20
152:11 162:3	130:25 160:20	fundamental	152:11	41:22,23 51:14
163:24 169:8	161:13 162:1	118:18 134:2,2	genes 117:24	51:16 52:21
fiscal 113:17	168:11,15	139:13	119:5 121:23	54:6,13,23
fish 35:24	formal 16:10	fundamentally	122:7 129:3	56:19,20 57:17
fit 85:25 86:6,6	21:16,16	156:19,21	genetic 118:25	58:3 59:10
95:9	formally 104:24	funding 114:1	132:4 134:22	87:14,14 99:15
fits 139:11	formation 66:21	funds 45:6	135:11,19,20	99:20,20 100:6
five 61:15,17,22	67:1	funniest 140:14	136:12	160:18
116:9,10	formed 122:7	further 9:24	genetically	give 14:18,19
fix 149:23 150:1	165:3	57:9 125:13	143:24 144:3	23:22 27:18
fixed 150:1	former 43:8	126:13 173:17	genetics 138:23	35:14 43:23
	<u> </u>		l	

				1490 100
54:16 58:17	54:20,21,25	83:16 85:22	51:9 65:5	150:23 152:1
67:11,11 98:18	56:15,24 57:1	109:21 113:9	groups 40:4,6	hallway 116:17
99:8 108:7	58:10,11,12,12	113:13,16,24	63:16 110:2,2	116:18
113:22 120:19	58:16,17,18	125:20 129:10	110:3,3 161:11	hand 11:10 13:6
161:3	59:14,22 64:14	131:4,8,21	groups-may	28:25 35:22
given 18:12 19:4	73:15,20 77:17	137:11 140:21	95:13	46:14 64:14
19:25 38:18	81:23,24 87:9	157:25 161:6	guess 7:23 8:2	86:9 88:11
50:18 54:1,8	88:11 90:7,7	161:10,11	10:7,20 29:13	116:18,23
59:8 60:4 69:3	90:14,21 95:10	government	29:20 30:20,23	118:25 137:2
74:3 95:9	97:21,23 99:22	3:21 112:15	31:1 38:20	147:7 156:11
100:20 108:16	104:11 108:6	161:25 162:1	41:22,23,24	161:15 163:25
158:3 171:14	109:22 112:21	governmental	42:16,19 46:6	166:16 171:14
172:18 173:4	112:22 118:1	34:11	71:1 80:11	handed 167:19
gives 23:23 72:7	119:1 124:3	governments	83:17 89:7	handy 69:19
133:4	129:21 130:22	112:12,13	90:25 92:13	happen 132:16
giving 113:21	131:11,18	Governor	95:10,15 101:6	139:15 154:10
glad 55:19	133:2 139:6,7	112:21	103:4 110:21	159:25 161:2
glasses 115:15	139:8,9,15	governs 164:11	122:23 129:5	happened 25:21
global 144:11	141:24 142:19	grace 122:25	130:19 131:21	81:17 83:3
go 6:13,21 12:18	142:23 144:18	138:22	153:21	happening
15:13 19:16	145:19,19	gradation	guidance 52:12	107:13
26:22 33:11	149:1 157:3,3	135:10	guidelines 36:11	happens 42:9
35:15 43:12	159:2 161:1	gradations	148:23 149:15	61:14,16,22
51:19 77:16	162:17 163:11	135:9	guilty 110:1	95:18 112:23
78:3,4 96:4	163:24 166:15	graduate 45:12	gun 113:25	happenstance
113:4 116:22	Golando 2:8,9	45:23 139:22	gutted 35:24	33:22
116:23 122:25	3:4 5:5,8 14:1	139:23	guy 7:8 55:22,23	happy 43:17
131:12,13	14:12 25:5,11	Graham 147:17	67:23 118:14	59:23 138:18
147:13 167:14	25:13,25 26:3	148:13	118:15	138:19 147:4
go-to 45:14	26:6,9,20 27:4	graph 126:22		160:22 164:18
God 23:6 68:3	27:6,12,14	graphs 93:15	H	hard 19:10,11
122:25 131:12	28:1,21,23,25	gratification	H 7:22 8:7,9 9:4	32:10 38:22
138:22 140:22	40:18 41:15	133:14,20	10:4 43:9	53:4 71:21,23
141:12 154:15	42:1 92:3,4,8,9	gravity 133:3	92:13	83:11,13
154:15 163:2,5	97:3 98:21,23	great 7:2 14:1	H.W 118:24	112:20 117:6
163:6,10	99:18 100:10	55:3 64:13	habitual 154:13	139:25,25
goes 51:5 130:21	101:3 103:16	104:13 115:12	habitually 154:3	158:17,22
137:24,25	163:11,14,19	118:11,14	Haidt 147:17	harder 41:16
going 9:24 11:9	167:11,19	133:18 151:20	148:6,13	140:1
13:6 14:18,20	169:21 173:2,8	greater 52:23	Haidt's 148:5	harm 148:6,15
19:5 20:1,1,6,8	gold 11:24	Greg 112:12	half 52:2,5,5	harmed 148:8
20:9,14 26:3	golly 127:18	grew 9:20	79:2	Harris 104:15
28:15,25 31:3	good 5:6,7 6:15	151:14	halfway 78:21	112:19
31:20 32:10	6:15 7:16	Grofman 8:24	hall 116:20	havoc 149:16
39:17,19 40:15	23:22,23 43:21	73:21	hallmark 150:21	hawk 113:18
42:20 43:22	43:22 45:8	ground 77:7	150:22	Hayes 7:18
46:3 53:6,9	76:22 80:19	group 34:12	hallmarks	HCVAP 92:14
1	ı	ı	I	ı

				. Tage 107
92:17 93:2,4	127:7,23	132:21 155:16	ideological	79:20 110:12
head 43:7 53:21	highly 89:15	159:5	112:17,18	117:15,16
96:21 142:10	hill 12:16	hour 67:12	128:3,21	130:19,20,23
heading 169:9	hire 43:8 45:25	hours 67:14	130:15 139:13	132:5 133:25
health 105:4	hired 15:9,10	132:24	143:9	157:21 159:23
hear 59:23 94:19	26:18 38:13	House 162:2,2	ideologically	167:23,25
114:5	42:25 44:1	Houston 1:2,23	131:7	imposed 136:22
heard 12:20	67:24	2:5 6:12,18,22	ideologies 115:8	impossible 162:5
22:5 25:20	Hispanic 21:24	7:5,10 9:6,12	ideology 111:16	imprecise 57:24
hearings 131:14	21:25 31:13,24	9:20 10:6	111:21,23	58:1
Heath 15:10	32:9 37:18,22	157:6 172:2	112:5,5,8	impressed
16:5 22:16	40:23 41:2,2	174:7	117:6 118:8,18	127:19
heck 116:10	61:3,25,25	huge 12:15	128:13 130:21	impression
131:15	62:1,16 63:7,8	huh 10:21	130:22,24	18:14
held 35:22	63:9,24,24	Hullett 2:14	133:4,9 138:14	impressive 9:10
help 4:4 105:24	70:14 75:8	human 112:24	143:5,25 144:3	improperly
108:4,4 141:13	77:15,23 79:23	117:19 132:8	144:5 147:21	84:19 122:7
166:15 169:13	92:13 95:19	humanity	idiot 134:18	impulse 152:10
helped 36:23	108:9	151:10,11	ignore 84:15	152:11,13,13
helpful 54:1	Hispanics 42:17	humans 120:15	143:11	152:14,15,18
168:4	63:5 108:10	120:17	II 10:16 153:19	152:21
helps 136:5,6	143:8,13,17	humbling 84:8	161:18	impulses 152:18
Henry 173:10	historically 96:4	hundred 64:9	illegal 149:1	153:10
hereditary	96:5 98:23	70:8	161:11	impulsive
135:14	102:5,6	hypothesis 72:9	image 113:22,22	114:22
hereto 1:25	history 33:12	72:18,22	imagine 61:14	inability 15:24
heritability	94:17,22 99:1	т	158:22	155:9
128:9,12,13	100:20 104:5	<u>I</u>	immediate	inactivity
heritable 138:8	117:13 138:6	icon 32:13	121:13	154:14
142:19	hit 67:20 68:4	ID 128:9	immediately	inappropriate
Hibbing 145:13	home 10:7	idea 60:6 99:24	10:25 23:11	116:4 150:13
145:21	homeless 150:6	104:19 109:9	immoral 116:4	150:23 153:19
hierarchy 120:6	homosexual	109:17 132:3	151:8	153:24 155:22
120:11 148:18	116:3	140:20 141:17	impact 85:15	156:14
high 6:13,16	homosexuality	149:8,10 168:6	159:15	inarticulate 5:20
7:21 11:7 45:8	117:1	ideas 129:25	impacting 81:1	incest 116:8
83:16,20,22,25	honestly 47:8	identical 118:4,8	implausible	inch 132:12
84:2 85:24	117:8 158:15	118:9,10	162:11	incline 152:24
86:8 118:8	hook 135:20	Identicals 118:6 identification	implications	inclined 150:20
151:12 156:6,6	136:2,3		54:23 169:5	include 75:12
156:11	hope 92:23	129:25	importance	included 91:7
higher 83:18	106:12 138:13	identified 77:14	154:6 156:20	97:1
85:2 93:4,6,7,8	154:15	87:13	157:14	includes 173:6
93:9,9,10	hopes 92:22	identify 130:7,8 identifying	important 20:10	including 16:24
94:12 123:22	horsey 87:20	128:17 165:24	31:12 44:17	21:25 142:14
124:18 125:6	hospital 154:16	identity 171:12	50:13 56:17	incompatible
125:10 126:10	host 82:18	Identity 1/1.12	60:17 75:11,12	61:9 71:5,6

	-			
inconsistent	114:10 149:18	instructed	16:18,19	J
31:1 70:22,24	152:16 153:10	103:17	intervenors 36:1	$\frac{\mathbf{J}}{\mathbf{J}}$ 2:14 173:3
70:24 71:1,15	153:25 154:4	instruction 6:1	36:8 37:9	January 3:16
incorporates	157:12	instructions	interview 9:18	Japan 9:20 10:9
155:25	inefficient 54:9	69:3	introduction 9:1	10:18 153:18
incorrect 70:18	infant 114:12	instrument	inverted 72:1	Japanese 153:20
incorrectly	infants 114:12	171:13	investigate	jerking 114:22
88:13 127:10	infer 107:15,22	intellectual	18:10	Jews 142:8
increase 82:7	107:25 108:25	135:4	invidiousness	job 9:12,13
169:16	109:2	intended 19:9	136:8	10:25 23:22
increased 89:9	inference 23:3	intensely 122:9	involved 17:3,10	85:23 113:9,13
increasingly	76:9	122:10	17:12 18:17	113:16,24
95:11,19	influence 153:16	intensity 123:9	20:21 36:25	133:18 159:20
130:23 165:19	influential 82:20	124:2,4,24	54:11 68:25	163:16
incredibly 155:4	82:20 111:9	125:14 126:14	145:16 154:7	jobs 132:17
incumbency	informal 21:20	126:24	involvement	Joe 118:15
66:9 82:15	21:22 24:15	intent 107:22,24	38:8	John 1:12,16,20
84:22,22	informally	107:25 108:3	involves 20:9	3:3,11,13 5:2
incumbent 83:6	104:24	108:25 109:2,3	involving 17:25	6:10 13:21
incumbents	information	109:4,12,16,19	31:18 33:14	112:3 117:9
34:11	16:6 17:5,12	109:21 110:8,8	Iowa 8:15,16,17	147:21 170:2
independent 1:6	18:13 29:18	111:13	8:18,20 9:11	171:1,5,11
29:7 67:5	32:22 33:3,3	intention 108:18	9:12,21 47:3	172:10,13,16
78:22 79:19	51:13 54:16	interacting	Iran 10:22 11:1	174:5
80:25 86:3	75:12 76:20	56:16	11:9,11,13	join 57:15,18
87:2,5 128:18	101:10 105:18	interested 46:10	12:7,9	joke 83:24
172:6	106:8,9 131:20	55:21,23	irrational	Jost 112:3
INDEX 3:1	173:4	173:21	109:23,24,25	147:21
India 135:25	informative	interesting 6:20	irrationality	judge 55:15,17
indicate 39:9,9	86:18	8:5,10,11 50:4	110:4	80:25 88:5
73:5 144:14	inherit 129:16	78:4 119:7	ISD 14:25 91:6	131:18
indicated 19:1	129:24	121:6	ism 111:24	judges 54:12,15
indicates 90:5	initially 20:14	interference	isolation 57:14	57:15
indication 85:22	injected 130:25	151:6	issue 39:1,21 57:22 82:7	judgment 20:3,7
indicator 84:4	injecting 65:9,9	internal 111:14		judgments
indict 78:5 indicts 77:11	input 35:18 49:18,23	internally 31:9 Internet 168:18	84:14 148:15 154:11 165:18	148:5
	· · · · · · · · · · · · · · · · · · ·		issues 16:22	judicial 149:15
indifference 151:9	inquiry 57:20 inside 117:25	interpretation 19:14 103:13	17:15 29:13	154:12,25
individual 33:18	insist 23:10	155:8	34:1 37:18	jumped 10:5
33:19 34:6	162:7	interrupt 6:3,4	66:12,13 75:16	June 27:11,11
73:25 106:21	inspirational	interrupt 6:3,4 interval 72:19	82:15 83:6	27:12,13,24
107:1,2,16	131:15,16	74:8,13	87:12 95:20	28:1
107.1,2,10	instance 1:17	intervals 31:8	113:7,8 118:18	jurisdiction
162:6	18:23 32:4	intervened	it.' 141:13	50:18 60:6
individuals	institute 25:21	36:17	iterative 23:8,10	104:6
107:12 110:2	instruct 103:14	intervening	23.0,10	jurisdiction's
			<u> </u>	<u> </u>

104:23 161:1 99:25 100:5,15 knowing 27:20 96:22 97: jurisdictions know 5:14,15 100:17,19 knowledge 97:5,6,7,8 98:24 6:6 7:3,13 8:3 101:9,15 48:14 104:24 100:12 10 jurist 154:10 8:7 9:8,19 102:11,15,16 105:10 103:2 110	3,9 2:13
98:24 6:6 7:3,13 8:3 101:9,15 48:14 104:24 100:12 10	2:13
jurist 154:10 8:7 9:8,19 102:11,15,16 105:10 103:2 110	:18
10:20 11:22 104:2,4,25 known 44:3 48:4 168:7	
K 12:1,11,13,20 105:5,8,11,17 171:11 Latinos 40:	13
Kansas 67:23 15:12 16:5,8 105:20,22,24 knows 109:17,22 41:7 42:4	
kept 141:1	6
Kevin 145:12,21 19:16 20:2 108:15 109:18 161:1 163:2,5 88:20 89:	11,16
key 122:2 21:5 22:21,25 110:16,21 163:6,10 93:19 94:	16
keys 121:13,14 23:12 24:20 111:2,4,5,7,25 Korea 161:18 96:15 101	:13
kid 12:11 141:24 26:17 27:20 112:1,4,4,9,10 Korean 10:15 law 2:9 38:1	18
kids 137:20 28:3 29:16,18 113:9 115:4,19 10:17 54:19 149	:1
kill 115:18 30:21 31:2,7 116:9 118:11 151:4 158	:13
141:22 33:19 34:5,7 127:17 128:15 L 164:15	
killed 137:8 36:2,20,22 128:25 129:5 label 39:17 lawmakers	
kind 9:24 11:18 37:25 39:2,19 129:11,20 157:3 137:21	
17:6,14 22:19 39:22 40:1,19 131:2,11,17,17 labeled 64:15,20 lawsuit 15:6	
27:20 39:6 41:22 42:8,12 131:21 132:5,7 69:15 88:12 15:19 24:	
52:6 53:10,12	,
53:13 56:13,14 43:19,20 44:11 133:17 134:8 labor 137:12 27:21 28:	5,18
65:4,25 70:19 45:14,15,16,18 135:12 136:18 laborer 137:11 161:2	
70:20,21 74:11 47:8,16 50:25 137:10 138:15 lack 32:22 lawsuits 17	:8
79:4 83:14 51:7,10,19,20 138:19,20,22 laid 89:24 161:6	
86:14 89:6,24 53:10,12,24 139:1,17,18,19 Lakers 7:8 lawyer 36:1	
105:18 112:18 54:15 55:9,11 139:20 140:17 Lakoff 148:16 37:2 38:24	
112:19 115:4 58:3,21 59:8 140:19,20 language 52:13 lawyers 21:	
120:24 130:9 59:22 60:24 141:7,13,19,25 57:24 153:5 24:16 29:3	
135:17 144:8 61:2,3,17,18 141:25 142:7,8 large 31:7 93:18 38:24 39:3	
147:18,20 61:18 63:21 142:25 143:11 93:25 94:1,8 68:11 160	:10
148:13,14,20 65:16 67:10,19 143:13,17,20 94:14 95:7 lay 101:3,5	
151:9,21 67:20,21,23 144:8 146:11 100:13,22 layperson 7	
153:11 154:17 68:1,2,4,6,7 146:14,15 large-scale lead 80:6 89	
168:3,3,15,15 69:5,6,8 71:13 147:23 148:7,9 144:10 150:4 leaders 143	
168:21 71:16,19 72:8 149:5,16,24 largely 88:22 leads 70:10	
kinds 66:24 72:10,13,23 150:1,6,19 128:13 129:22 League 161	
80:16 105:24 74:5,7,10,11 151:8 153:7,23 145:3,23 learn 96:16	
133:19 135:6 74:16 76:1,2 153:24 154:1 Larger 94:9 152:7,9,10	,
147:24 154:1 76:22 79:4,10 154:13,23 Late 6:24 learned 86:	12
154:12 155:19	
king 23:10 46:4 80:20 81:15 158:19,19 50:16,20,23 led 31:11 13	
150:5 83:5,9,17 84:7 159:21 160:22 53:15 61:20,21 left 20:13 8	
King's 23:5,7,7 84:10 85:20,21 160:24 161:2,5 62:6,17,25 left-right 13	34:9
23:10,13,16 86:3,5 87:5,21 161:7,12 65:6 89:3 legal 38:22	
kiss 142:8 91:19 94:18,23 162:14 163:3 92:13 94:1 39:16 40:	
knew 7:3,15 95:2,15 96:2,7 164:15,16 95:12,25 96:10 55:8,21 7	
44:3 141:9 98:4,6,12 167:9 168:2,6 96:10,13,14,17 legally 55:1	U

				rage 190
legislation	152:14	LLP 2:4	119:20 120:3	Magnolia 2:9
156:13	light 116:20	local 3:21 4:2	123:1,7,8	main 17:23
legislative 35:9	lighter 136:19	63:22 112:12	166:12 167:7	mainstream
legislator 139:14	lightly 20:13	112:15 165:5	Lord 109:21	131:5
legislators	likelihood 118:7	locally 33:24	lost 121:19	major 8:21
109:20,24	129:15	locals 89:5	lot 8:3 11:8	majorities 56:21
legislature	limit 104:10	location 111:4	15:21 18:12	57:4
109:16,17,18	line 19:15,24	Locke 8:6 117:9	20:9 24:1	majority 41:2
Lesbian 140:24	55:2 71:25	long 43:12 58:14	31:25 54:12	55:1,1 56:23
let's 12:4 27:5	85:25 86:7	67:8 89:2	58:25 74:19,20	57:6 58:10
27:22 33:11	166:22 170:4	132:10 154:14	75:25 79:4	63:6,8,11 75:6
50:9 58:24	linear 48:6	longer 20:16	80:20 99:3,5	98:15,16 99:13
61:20 62:24	78:18 85:11,17	57:12,13 63:12	109:9 111:6	100:14 103:22
64:13 85:6	lines 35:10,11,12	63:13 121:18	121:19 122:19	143:13 155:23
91:21,23 93:14	35:13 58:20	121:18	130:17 153:3,3	majority-min
96:4 118:12	156:2	look 21:10,17,22	lots 10:22 31:5	15:25
124:2 127:9	link 111:15	22:19 24:14,15	40:5 63:4,5	making 39:4
141:24 160:13	Lisa 25:5,7,10	24:16 29:1	74:9	55:8 79:4
166:24	25:13	30:21,23 31:9	loud 113:23	109:13 129:8,9
Letter 3:23	literal 155:4	35:16 58:1	114:5	137:12,20
level 52:17 56:23	literalism 123:8	66:18,21,24	Louisiana 92:24	156:4
58:15 59:8	155:7,13	76:18,24 79:11	love 122:23	male 107:5
73:25 74:5	literally 19:19	82:3 83:8	147:2	males 120:17
80:6,8 87:7	19:21 121:11	91:21 93:15	lovely 122:18	manipulate
101:25 106:17	155:13	98:5 107:6	low 32:8 58:8,20	115:20
107:1,2,3	literature 89:1,8	111:3,7 115:10	80:20 81:9	manner 71:2
109:12 123:10	165:15	115:15 132:20	83:22 84:6,15	map 98:19 99:15
160:4	litigation 28:20	135:6 138:19	84:19 85:3	99:18
levels 44:25 57:3	62:14 102:19	143:5 145:19	86:9 89:15	maps 98:24 99:2
101:18 143:18	164:10	148:9 164:18	151:13	99:5,20 100:16
151:12,13	little 5:20,20	164:19	lower 92:20 93:3	March 1:13,19
lever 143:16,16	33:11 42:21	looked 21:18	123:22,24	164:24 170:3
liberal 115:23	58:24 62:3,18	38:5 64:25	124:18,20	172:11
115:24 117:15	90:12,22 115:4	65:1 67:22	125:10,12	marginally 93:9
128:14 138:22	123:25 127:7	74:10 79:1	126:10,12	marked 13:7
139:2 143:18	128:9 134:16	97:20,25 99:21	127:23,25	markedly
liberalism	134:16,24	114:11 140:12	lowest 53:8	118:17
111:24	141:23 144:19	166:4,9	Lucas 173:10	marker 142:25
liberals 114:7	145:8 146:17	looking 18:18,20	ъ	markers 135:16
115:5,6,9,12	live 6:11,12	21:11,14 22:17	M	135:19,23,24
115:13,14,25	132:10	30:13 37:13	M 3:15	marriage 113:14
117:11 139:1	lived 6:17 9:6	65:3 75:4	machine 1:21	116:25 129:18
libertarianism	11:12 12:10,14	81:13,14 100:5	158:4,8	Martin 2:8,9 5:8
111:25	12:17 117:22	138:25	mad 139:9	28:17 34:13
life 47:6,8,8	118:16	looks 62:4 64:17	Magazinnik	173:2,8
112:6 117:20	lives 132:16	91:1 92:12	88:9,24 91:17	martin.goland
128:11 149:11	living 12:15	98:13 119:18	magic 162:13	2:11
	<u> </u>	<u> </u>	1	I

Marxism 117:9	154:10,13,25	meets 99:15	mind 6:8 14:23	model 80:7,12
mass 70:21	155:1,10	melanin 135:13	26:1 33:12	81:7 84:5,12
master's 8:14	158:14	members 17:20	37:24 56:4	84:15,17,18,18
match 99:23	meaning 40:2	17:22,25 18:17	59:16 77:17	84:20 85:6
150:14	50:6,6	memo 166:13	90:22 123:3	modeling 86:14
material 118:25	means 19:19,19	mental 79:5	137:12 139:12	models 84:20
materials 14:11	19:21 32:9	mention 134:13	144:20 163:22	moderate 52:16
maternal 148:17	48:7 51:8	mentioned	164:19	52:17,19,25
148:20	53:16 55:18	23:11	minds 139:8	55:15 56:12
mathematically	58:3 78:9 85:8	mentor 10:4	mine 145:13	102:2 128:19
74:14	93:21 122:2	43:8 78:13	minisculey	143:17
matter 52:22	151:4 155:11	mercy 19:13	125:6	moderately 41:9
71:17,18	157:15 158:9	met 5:8 9:6	minorities 56:21	41:17,18 102:8
112:15	meant 155:13,17	11:15 15:22	57:2 58:8	modern 62:21
McBride 25:10	measurable	43:4 51:16	59:10 75:17	142:1
25:13 29:11	152:3	85:9 160:7	105:2	modest 40:21
164:12	measurably	metacognition	minority 3:21	52:16,19 56:12
McKinney 2:15	116:11,25	133:12 152:9	4:4 39:12	102:2 120:8
mean 11:21 12:7	measure 51:3,4	159:9	51:11 54:24	134:9
18:11,25 19:15	73:17 78:10,11	method 47:5	56:20,24 59:11	modestly 41:9
20:5 28:3 31:1	78:14,18,19,20	48:6 73:23	75:19,19 76:19	41:17,18
31:11 33:2	83:25 84:2,3	77:3	77:14 96:5	modifications
34:3,5,10,10	92:20 107:24	methodologists	103:24 104:22	98:12
39:6 40:19	113:10,12	45:20,23,25	105:9,13 106:3	modified 98:1
42:12 50:25	measured	46:2	160:2,3 166:15	molecule 120:18
51:6,7 52:11	165:11	methodology	minus 72:23	mom 10:12
53:2,25 54:2	measurement	8:22 46:12	minute 27:18	moment 49:5
54:10 55:22	80:22	methods 46:1,1	141:24 157:4	77:18 141:17
57:13 61:1	measurements	46:8 47:2,16	minutes 145:4	money 158:15
66:13 72:11	107:16	49:10 50:2	mischaracterize	months 158:3
74:7 75:11	measures 48:10	71:11	60:13	moral 140:18
76:3 77:1	76:21 78:17	metric 80:24	mismatches	147:19 148:5
80:11 87:1	92:18	Michigan 9:14	143:9	150:21,22
89:12 90:17	measuring 70:14	9:17 67:24	missing 166:19	152:1
93:20 94:1	83:24 108:2	mid 28:1	167:6	morality 148:12
98:4 100:24	mechanical 54:6	mid-decade 35:7	misstate 53:1	148:14 150:4
102:8 103:4	mechanism	36:15	mistake 137:20	morning 5:6,7
106:6 109:8,9	114:3,5	mid-redistrict	mistaken 94:4	mother 9:5
109:19 111:3	median 131:2,3	36:4	137:6 148:16	129:18
113:3,5,21	meet 17:19 18:1	mid-season 36:4	misunderstand	motion 114:22
131:21,24	48:5,8 87:15	middle 7:23 11:7	132:2	motivated 148:7
135:1 138:16	99:20	43:15 53:3,13	mix 75:13,14	motivations
139:16 140:17	meeting 22:15	55:14	108:23	18:15,16
142:20 148:24	48:11 131:12	midrange 52:6	mixed 16:25	move 27:5 57:9
149:7 151:20	156:11 161:16	military 10:12	89:6 129:18	moved 44:15
152:1,18,20,25	meetings 109:25	10:13,23 114:1	169:12	movie 11:18
153:13,22	131:13	millions 137:8	mixing 74:19,23	moving 11:8
	•	•	•	•

_				Page 192		
17:2 33:25	needed 20:18	74:25	126:21 127:11	104:5		
53:21 96:21	needs 82:8	noncohesion	120.21 127.11	officials 34:11		
114:21 132:13	negative 90:9	53:7	numbered 1:18	105:12		
MPA 8:12	122:13 141:14	noncompetitive	numbers 23:17	oh 7:4 13:20		
multiple 87:5	165:15	81:22,24	95:12 99:12,22	23:6 35:7 44:9		
municipalities	negatively 138:7	nonethnic 63:16	99:23,25 100:3	46:25 80:16		
161:14	negatively 138.7 negotiating 69:6		numerical 59:9	115:12 127:18		
- '	negotiating 69.6 negotiator 43:21	nonexpert 105:18	Humerical 39.9	163:3		
mushmouthy 5:21	43:23	nonidentical	0			
mutation 121:18	43:23 neighbor 139:14	118:13	Oakland 9:13,19	okay 6:13,25 9:16 13:13,16		
122:7	neighbors		9:25	19:25 25:24		
122.7	139:17	nonminority 39:13	oath 171:11	26:2 27:22		
N	neither 46:2		object 26:16	28:21 29:4		
N 2:1,15	108:24 173:17	nonpartisan	28:15 40:15	30:10 34:14,25		
name 5:8 6:9	networks 114:21	61:22 63:18,20 65:10 128:4	100:23	42:20 44:25		
25:9 39:24	networks 114:21 neuro 151:23		objected 26:11	42:20 44:25 46:16 47:21		
68:3,21 170:2	neuro 151:23 neurotypical	130:16,23,24 131:5 166:1	objection 27:3			
171:12	V 1		41:13 96:24	48:2 50:15,20 50:23 64:20		
names 20:20	151:21	nonsensical	99:16 100:8			
narrow 50:5,6	neurotypicals	51:10,12	observer 41:4	65:24 66:2,18		
70:20	151:24	nonsuited 15:14 15:24	42:2	67:3,8 68:23		
NASA 11:5	neutral 35:16	- '	obsessed 162:4,9	69:15,21 71:14		
national 114:6,8	36:25 90:9	normal 53:10	162:10	71:20 72:6		
153:14	never 16:9 29:16	86:22 106:24	obvious 69:11	73:8,9,13,19		
nationality	29:19 32:7	normally 29:15	141:21 162:19	75:10 80:10		
153:5	39:22 44:1	31:16,17 81:13	obviously 31:12	86:25 87:20		
natural 155:16	68:4 87:25	101:25 106:16	61:9 70:12	88:7,11 89:11		
natura 153.16 nature 15:3,16	89:22 96:23	133:7	98:4,8 130:17	89:20 90:14		
17:6 54:1 74:3	112:2 116:9	north 9:25 95:6	132:13 135:1	92:3 93:11		
81:20 95:21	140:25 144:14	Nos 5:1	140:17 142:1	95:5 96:4		
159:23	148:25 157:24	nose 138:25	occur 142:2	97:13,16 99:4		
near 74:12	new 37:13 95:13	not's 149:4	occurs 156:25	99:12 101:23		
109:17	nice 10:7 27:21	NOTARY	odor 120:21,23	102:21 104:15		
Nebraska	55:22 62:3	171:18	120:24,25	104:22 105:9		
145:22	85:13,14	note 26:24	120.24,23	105:12 107:14		
necessarily	114:11 115:16	noted 165:9	121.3,4,4	107:19,22		
48:22 64:5	115:16,17	171:2	offensive 121:1	110:22 111:11		
107:12 133:16	116:11	notice 3:11 13:1	offer 43:21	123:15,17,25		
necessary 82:9	night 118:3,6	13:4	95:21	124:21 125:13		
need 6:1 25:25	nine 100:11	notion 165:18	offhand 67:13	126:20 127:2,8		
25:25 26:17	noise 32:20	notions 117:6	office 2:9 36:24	127:14 128:1,8		
27:1 54:25	113:23 114:9	154:12	149:21 161:25	129:8 131:19		
69:11,19 84:7	noises 114:6	novel 64:4	171:14	143:3 144:5,17		
84:8 90:21	non-Hispanics	null 72:9,17,22	officer 10:14	145:6,9 163:19		
110:23 142:9	143:8	number 29:1	172:17 173:5	166:7 167:23		
149:25 160:4	nonbiological	55:16 73:4	officer's 173:12	169:7		
162:25	142:14	86:3,4 87:7,8	official 36:5	old 12:3 22:13		
102.23	noncandidate	91:25 95:14,19	omeiai 50.5	39:19 45:15		
	ı ı ı ı					

83:24 129:12	opinions 111:6	outthink 134:10	parliamentary	parts 134:2
131:2 161:17	opponent 161:8	overfitting	162:15	146:8,9
161:20	opportunity	85:25	parole 149:12	party 4:1 14:6
oldest 111:22	160:3	overinterpreti	part 15:20 58:8	34:16 62:22
olfaction 121:24	opposed 20:7	85:4	59:20 74:15	65:8 108:21
olfactory 121:9	33:21 37:13	overlap 43:2	77:16 78:24	128:9,22 129:7
121:11	38:9 40:4	override 159:9	82:6,6 83:1	129:12,16,24
OLS 23:20 27:6	73:24 157:10	159:10	88:7,17 89:25	130:2,7,8,9
30:5,12,19,24	optical 79:10	overt 105:6	109:6 114:4,13	143:6,7,15,22
31:6,16 32:11	oral 1:11,16		117:7 119:4	165:5 172:24
32:13,17,20	3:11 172:17	P	120:15 121:10	pass 142:24
33:8 47:4,13	order 58:4 88:12	P 2:1,1	121:11 123:3	149:1 169:21
47:21,24 48:2	121:12 125:15	p-value 72:6,7	133:25 134:2	passing 23:11
48:4,5,9 49:12	126:16 148:18	72:16 P G2 14	136:21 138:6	paternal 148:17
49:14 64:8	167:13	P.C 2:14	143:1 145:25	148:19
65:25 70:23	ordinary 27:7	p.m 1:20 163:18	146:23 147:15	patriarchal
71:7 73:16,23	28:13 46:23	163:18 167:18	152:13,14	153:8
74:1,6 75:4	47:14,17 79:13	167:18 169:23	158:24 165:3	pattern 60:5,5
81:2,3 85:10	79:15	Pacific 10:16	165:18 167:21	70:16 74:17
85:13,14,17	organized 34:13	page 3:1,9 14:4	168:2	108:12
164:11	150:4	77:20 87:10,11	participation	patterns 66:25
once 20:3 52:10	organizing	90:24 91:23,25	89:16	pause 98:19
57:18 107:9	111:21	92:2,4,5,6	particular 32:18	99:8
161:16 162:21	orientation	93:13 123:1	59:12 83:13	pay 38:1 84:8
ones 83:22	137:17,18,23	126:21 164:4	111:9 113:18	peak 7:22
121:16	138:3,12	166:19,21,25	120:5 141:17	Pearson 78:13
open 140:12	141:16 142:6	167:4,7 170:4	144:12 149:22	Pearson's 78:11
159:13	original 23:7	pages 100:11	149:23,24	78:13
opening 11:19	27:24 173:13	paper 11:22 89:22 105:19	159:15	peer 47:24
openly 140:8,19	originals 13:22	155:12	particularly	pejorative 115:8
141:5	166:24		17:2 22:17	penalty 149:3,4
operating 58:2	origins 73:21	papers 145:15	23:8 75:13	149:4
128:20 150:3,4	orthodoxy	paragraph 91:2 147:10,11	89:21 167:25	people 8:3 9:4
159:24	117:16	152:17 156:17	parties 129:17	12:1,17 17:17
opinion 16:11	ought 156:4,14	169:8,8	173:6,18	18:17 23:9
41:7 46:14	156:15	parameter 85:4	partisan 61:2	39:9,24 45:14
48:17 49:9	outcome 28:13	85:6 86:5	63:11 66:15	45:19,24 51:6
55:10,21,24	49:7 62:7,9	parameters 32:3	108:7 130:16	51:7 53:5 68:2
69:24 95:7	110:4 128:3	49:14 84:17	162:17 165:20	72:19 80:17
99:17 100:20	173:21	85:11	168:10,11	98:8 106:22,22
101:1,2,3,5	outcomes 66:19	paranoid 115:9	partisanship	107:25 109:4,5
103:21 104:12	66:22	paranola 113.5 parents 118:9,10	65:9 108:12	109:6 111:23
104:14,16,17	outhire 44:2	128:11,14	111:1 128:6,7	114:6 116:6
105:14,15	outlining 145:18	129:16,17	129:22 131:1	119:24 120:19
113:14 116:24	outside 11:23	135:14 136:18	165:10,11	120:20 121:1,2
116:25 146:7,8 146:9 160:6	40:16 41:8	137:19	partly 38:23	121:3,4 122:4
140.9 100.0	104:8	15/.17	84:17	122:6,9,12,12

122:19,19,21	78:23 80:1,2	138:8,8,10	please 6:9 14:1	73:10 95:11,19
129:23 130:3,4	91:5,9 93:19	142:15,25	29:1 34:19	157:1
131:4 132:2,3	95:6 101:20	physiological	62:5 78:9	policies 146:21
132:16 133:7	114:19 118:24	121:25	113:4 119:17	policy 8:23
134:13 135:8	119:1	physiology	119:23 123:2	66:13 109:24
136:15,21,23	percentage	121:21	134:25 164:2	139:10,10,12
136:25 137:9	19:16	pick 129:21,21	pleasing 121:4	157:11 168:3
137:13,17,18	perfect 50:8	picks 147:22	PLLC 2:9	168:16,22
137:19,23,24	51:4,5,22 73:7	picture 23:24	plot 79:11	policymakers
138:2,11 139:8	78:16 98:6	82:10 99:24,25	plots 70:16	168:4
140:3,5,12,15	159:19	100:3 113:11	plus 39:11,13	political 3:18
140:16,21,24	perfectly 57:7	piece 62:3 76:19	58:13 72:23	20:9 45:20,22
141:10,11,20	58:14 86:6	155:12	point 19:2,17	111:16 112:6,7
141:22 142:1,3	perform 38:17	pieces 23:19	20:14,15,16,19	117:11 118:18
142:5 144:12	65:21 67:5	pike 142:10	21:8,17 28:18	119:9 123:4
147:23,25	period 9:5 16:13	pipe 138:18	29:19 36:2	139:24 147:20
148:4,6,24	16:15 34:19	pisses 38:24	37:3 43:3	147:21,21
149:11,11,18	68:5 117:13	place 7:5 70:2	67:19 84:21	148:14 165:18
150:3,11 151:2	person 19:17,19	83:14 104:20	128:24 129:8	165:25
151:2,3,7,10	106:21 115:1	107:11 132:18	131:20 133:20	politically 40:14
151:11,12,12	118:1 119:6	160:19	134:16,18	41:7,11 50:17
151:16,21	133:18 138:23	placed 147:23	146:3 152:2	50:21,24 56:5
152:6,24 153:2	140:17,18	places 10:22	154:5,5,25	101:13 102:6
153:3 154:6	142:19 149:23	11:4 21:14	156:16 162:16	politicized 95:20
155:2,3,12,17	150:6 151:21	70:11 98:2,11	pointed 112:3	165:20,20
155:19 156:17	168:25 171:12	115:2 165:13	points 17:14	politics 8:22
156:21 157:3	personal 44:6	plaintiff 1:4,17	69:23 81:10,11	58:22 111:23
157:19 158:12	139:19	2:3 33:8 64:22	81:11,13 86:4	118:23 120:4
159:7,8 161:21	personality	172:4 173:9,13	86:6 168:5,5,9	132:8 133:25
162:22 163:3	109:5	plaintiff's 87:15	poking 143:19	139:7,18
168:14,20	personally 44:19	plaintiffs 39:5	polarized 16:12	148:17,17,18
people's 106:18	146:15 161:5	plaintiffs' 39:10	20:23 21:6,10	148:19,20
109:6 116:24	171:11	plan 34:15 35:13	22:6 37:6	158:25
135:10 150:7	perspective	35:16,18,22	38:15,19,21	polling 21:14
151:9,18,18	53:23 142:5	36:5,6,9,13,14	39:11,14,25	98:2,10
159:6	167:24	36:22,25 37:20	40:2 46:16	polls 70:15
percent 21:25	Ph.D 1:12,16 3:3	97:19	47:19 49:2	poor 80:22
22:2 39:11,12	3:13,15 5:2	plans 16:25 34:4	50:9 54:5,13	154:10
40:24 50:16,20	9:11 170:2	play 113:23	54:14,21 57:10	poorly 150:13
50:23 51:20,21	171:1,5,11	165:12	57:11,17 58:25	population 19:4
52:4,9,18 53:8	172:10,16	playing 7:8	59:3,5,19,24	19:4 91:14,18
53:9,15,16	phase 145:17	159:17	60:2,3,7,10,14	92:11 93:22
56:4,7,9 57:6	philosophy	pleadings 5:10	60:17,19 61:4	94:2 95:6 98:5
58:13,15,17	150:25 154:13	pleasant 120:24	61:9,11,13,15	98:6,13 119:3
59:17,18 62:6	Phone 2:6,10,16	121:3	61:23 62:4,11	119:6
62:7 64:9 69:1	physical 121:11	pleasantness	63:14 67:6	pork 45:6
70:8 74:8,12	132:4 136:10	120:1	71:3,12 72:4	portion 120:20

				. rage 175
120:25 145:7	predicting	117:18 120:15	probability 72:8	120:16
146:18,19,20	113:13,24	120:17 136:12	72:8,13	professor 10:3
posit 89:15,17	prediction	presented	probably 9:2	24:1 42:21
157:23	130:22	145:15	18:15 20:6	44:20 47:2
positing 89:19	predictive 83:9	preserve 157:12	24:17 27:13	69:24 73:9
position 26:19	114:19 158:10	president 162:5	28:7 33:23	86:20 97:18
91:7 113:25	Predisposed	162:7	38:1 48:20	137:11
132:21,25	144:22	press 14:6	67:16 81:8	professors 45:15
134:21 142:17	predisposition	pressured 55:9	94:14 96:12,14	program 105:23
positive 90:8	129:15	Preston 118:25	102:10,10	programming
93:18 122:12	predispositions	presumably	128:16 130:19	24:1
126:15,24	134:9	78:16	130:20 137:20	programs
137:16 141:14	prefer 130:3,8	presupposes	145:11 155:17	105:23
168:7	162:15	158:7	155:20	project 11:20
positively 123:9	preference 55:7	pretty 7:16 8:2	problem 25:12	projects 9:7
124:23 125:14	120:6,10 130:2	9:19,20 11:11	32:14 58:13,19	prolific 44:14
possibilities	preferences	23:23 38:22	58:19,20 82:24	promise 6:7 49:5
108:5	123:8 125:15	46:6 68:5,6	83:1 149:22,23	50:10,11
possibility 21:23	126:15 128:3	80:19 109:23	162:18,19	154:18,22
157:12	161:8	109:25 124:12	problematic	prompt 116:13
possible 15:20	preferential	125:20,22	31:5,6 32:17	117:4
25:21,23 30:20	76:10	131:17 134:9	49:21 56:18	prompts 117:5
30:22,23 53:8	preferred 21:25	134:11,19	57:23	proof 87:16 88:1
84:22 131:23	57:4,5 62:1,16	140:23 143:8	problems 49:5	properly 84:20
131:24 138:10	75:5,6,17	143:18 159:19	76:7,13,14	prophylactic
possibly 18:16	76:11,16,18	159:20 162:24	156:23 162:24	18:21
128:19 137:21	77:14 95:25	previous 16:16	Procedure 1:24	proportion
potential 22:18	96:5,15,22	25:8 26:10,17	procedures	70:14 79:17,22
165:15,24	97:4,5,9	30:8 124:13	150:3,5	79:23 81:15
power 132:23	103:24	125:7 169:2	proceeding	107:5 135:13
136:7	preferring 63:24	previously 13:7	173:19	137:22,24
powerful 111:9	prejudice	15:7 38:17	proceeds 77:21	proportional
132:17,22	140:20 141:18	69:15 71:7	process 5:17	162:23
134:7,11 136:5	preliminary	primaries 50:13	104:23 105:1	proposed 97:18
136:14	21:9	primarily	111:14	protect 137:20
practice 74:15	premarital	145:17 165:14	produce 32:4	protected 20:16
precinct 66:25	113:14	primary 77:2	74:1 84:21	29:24 103:14
79:22,23 82:22	premarked 5:1	principle 112:10 112:11 148:4	86:8,9 149:16	protein 122:1
precise 67:12 70:14	preparation 64:21 65:17		168:20	Protestants 142:7
	67:4 69:4	principles 49:10 50:1 112:1	produced 1:16 80:2	protrudes
precisely 93:17 95:23 121:25	prepared 29:7	prior 42:3 43:3	produces 81:3	121:12
precursor 132:4	prepared 29.7 preparing	prison 149:11	87:6 99:25	proud 7:6
132:4	173:13	privilege 25:4	100:3	138:21
predict 112:20	presence 116:13	26:12 28:20	producing 45:3	prove 80:14
133:1	present 2:18	privileges 28:17	product 28:16	proved 171:11
predicted 72:25	21:3 33:5 89:3	privileges 20:17 privy 20:25	49:10 69:1	proved 171:11 proven 157:23
F-041004 / 2.23	1 21.5 55.5 67.5			F-0,01137.23

				1490 170
provide 22:25	push 132:18	23:24 26:1	143:5,25 148:2	70:23 71:7,7
24:22 30:3	pushed 132:25	98:5 127:9	153:4 155:24	83:5 110:17
36:25 38:6,8	put 11:24 17:19	quickly 30:13	155:25 156:4	random 158:10
38:11 69:8	17:22 26:21	154:2	156:13,16	randomly
135:20 164:23	36:19 55:14,14	quietly 132:24	157:1,17,19	118:21
provided 17:5	91:25 110:2,2	quite 8:10 11:9	158:13	Randy 23:25
29:11,17,18	115:12,21	28:5 32:4 70:6	races 63:18	range 43:25
30:9,17 33:8	139:19,20	109:4 131:25	75:14,15 76:10	52:14,18 53:3
36:11 52:12	142:17 145:19	133:9 148:22	77:12 144:6	53:13 56:11,13
64:22 65:2	147:1 155:12	157:24 161:3	racial 59:7 82:21	72:10 101:16
67:2,24 87:14	156:13	quote 90:5	105:6 135:18	101:17 102:10
99:23 103:6	putting 75:3	quoting 87:12	136:20 142:16	115:24
106:2 164:12	82:9		146:19,21	rare 122:8,10,22
165:2	puzzles 47:10	R	152:18 158:24	rate 44:19 48:4
provides 48:9		R 1:12,16 2:1	158:25	re-present 27:1
90:10	Q	3:3,11,13 5:2	racially 16:12	reach 38:22,25
providing 17:12	qualified 48:14	23:15 31:23	20:23 21:6,10	70:20,20
29:20 51:13	qualify 62:18	32:2 78:4,8,10	22:6 37:6	reached 20:15
80:24 89:9	quality 32:8	78:20,22	38:14,19,21	29:19 40:10
90:2	45:8 49:17	123:13 124:9	39:11,14,25	reaching 87:7
provisions 1:24	131:7	125:3,18	46:16 47:18	reaction 114:10
proximity 54:9	quarter 132:12	126:20 170:2	49:2 50:9 54:5	116:2
prudent 160:25	question 6:2,6	171:1,5,11	54:13,14,21	reactions 114:22
161:4	6:15 17:23	172:10,16	57:10,11,17	read 5:10,10
psychologist	26:13 36:19	R-square 78:5	58:25 59:3,5	145:6 146:2
147:22	41:10 45:11	80:6,8,11 81:6	59:19,24 60:1	147:9 169:7
public 8:14,22	46:10,11 48:21	82:14 83:16	60:3,6,9,14,16	171:1
40:1 120:20,22	50:14 51:6,22	85:24 123:17	60:19 61:4,9	reading 105:19
120:25 131:8	52:9 53:3 54:4	123:23 124:11	61:11,13,15,23	ready 43:12
168:3,15,22	55:4,25 56:19	124:19 125:5	62:3,11 67:5	real 7:22 26:1
171:18	57:15,18 58:5	125:11 126:1	71:3,12 72:4	30:13 127:9
publication	62:5 82:21	126:11 127:2	73:10 95:11	157:14
47:25	103:10,13,20	127:20,24	157:1	reality 143:1
published	106:14,17,19	R-squared	racism 136:14	realize 28:5
119:19 145:1	106:20,25	79:16 81:4,9	157:10,14	132:9
pull 93:14 133:5	131:22 143:23	83:20 84:1,3,6	158:6,16,22	really 7:4 8:5
133:6	144:17 150:19	84:15,20 85:2	racist 152:19,20	9:24 12:15
pulling 82:10	150:22 153:17	85:3,7,10,21	153:1 154:4,9	15:14 17:18
pulls 145:14	155:10	86:8,10,22,22	156:19,21	19:12 31:14,19
punished 150:12	questions 5:25	87:4,8,9	157:5,6,15	43:11 45:22
punishment	14:22 17:18	R-squareds	158:8 159:13	52:3,20 53:20
149:2,3,6	32:23 49:1,16	83:22,23	racists 157:7,16	58:6,8 60:4
purity 113:15	49:17,19 54:2	race 40:2,3,3	ragging 154:19	67:15 71:21,24
117:2,4,5,7	56:1,2 59:15	59:19 61:18	rain 132:13	77:1,8 78:4,19
purposes 171:13	163:20,22	63:14,19	raise 118:10	78:25 79:14,20
pursuant 1:23	169:22	134:22 135:2	rampant 112:8	81:10 82:3
13:1 173:4	quick 21:10	138:9 142:14	ran 24:17 70:23	83:11 85:5
			<u> </u>	1

				. Tage 177
86:10 89:5	122:8	reeducation	126:15,25	replace 37:11
102:11 110:5	receptors 121:17	137:4,7	relationships	replaced 23:12
110:12 111:12	121:22,24	refer 69:20	107:20	36:14
111:13 113:9	Recess 163:18	reference 77:17	relative 37:13	report 3:13,15
114:11 116:5	recognition	165:10	95:12	13:15 14:4,8
127:16 128:5	115:2	referenced 14:4	relatively 85:22	14:11 16:4,10
129:10,10	recognizable	14:6,11	relaxed 123:10	24:21,22 29:17
131:1 132:1,1	98:10	referencing 90:2	release 14:6	29:20 38:6,7,9
133:12,15,22	recognize 39:7	referring 142:21	released 35:18	38:12 40:20
133:24 134:1,2	47:4,5 56:17	reflect 168:20	relevant 46:14	41:8 49:5 64:8
134:6,11	115:5,6 132:11	reflex 114:12	reliability 50:6	64:8,13,18,21
136:24 140:7	156:7,11	reformed 117:16	reliable 46:18	64:25 65:4,12
141:8 142:17	recognized	refresh 38:3	49:10 85:22	65:18,24 66:2
151:8 152:8	44:18 98:1	refusing 26:13	reliably 50:2,3	66:5,8,9,11,16
153:19 154:11	recognizes 156:5	regard 51:13	70:20	67:1,5,21,24
155:4 156:23	recognizing	85:19 133:4	relied 14:11	68:9,10,12
157:24 158:17	136:13,24	138:13 156:25	165:7 167:21	69:4,8,12,17
159:2 161:20	recollection 15:6	158:13 165:14	religion 117:14	69:18 71:11
163:14 168:1	15:21 31:2,8	regardless 144:6	153:6,8	73:1 74:1
realm 103:7	38:3 160:16	150:9 156:16	religions 117:15	77:16 78:6
134:11	recommendati	157:17	religious 130:1	80:4 86:21
reason 23:8 40:5	168:16	registered 90:25	rely 74:4	87:10,14 88:7
51:18,18 70:1	record 1:24 5:25	91:4,5,8	relying 29:24	88:8,17 89:14
90:5 117:17,18	6:9 26:7,24	Registration	31:24,25	89:23 90:1,4
135:8 144:16	55:20 59:2	174:6	remade 11:21	90:24 97:19
157:25 161:10	86:21 127:20	regression 8:25	remain 44:10	101:11 102:17
161:11 170:4	147:1,4 163:21	9:1 24:17	remarkable	102:22 106:6
reasonable 27:5	164:22 167:15	28:13 46:17	116:14 121:9	119:19,22
49:25 76:20	167:17 172:18	47:14 65:25	133:15 154:24	165:3,9,12
83:15 135:17	173:7	79:16 107:19	remarkably	166:2,10
166:2	recorded 114:13	regular 156:13	112:4 151:13	167:21,24
reasonably	114:16	regulate 137:22	154:10	reported 1:21
70:20	recording 89:20	related 13:15	remember 12:12	79:15,16
reasons 17:21	records 16:7	14:3,5,10	12:14,14 13:9	Reporter 167:14
73:15 80:21	recruited 10:1,5	16:22 34:17	15:12,16 16:2	172:13
recall 16:8,11,14	recruiting 44:2	37:18 95:20	20:20 34:9	Reporter's 3:6
18:10 20:23	Redbud 2:15	112:23,24	36:17,18 37:12	172:10
21:21 24:21,23	rediscovered	113:8,15 117:2	43:6 47:15	Reporters
24:23 28:12	154:15	120:3,4 121:21	128:23 146:23	172:23 174:6
33:3 42:10	redistrict 36:4	168:22,22	166:5 167:3	reports 5:10
64:11,11 65:14	redistricting	173:18	168:19	29:6 32:25
65:15,16 67:13	17:8,9 35:2,9	relating 87:13	remembering	73:4,4 169:2
77:11 91:20	35:11 36:15	relation 89:11	37:16	represent 5:9
102:21 103:1	reduced 30:14	relations 116:3	remind 27:9	25:15
120:7	reduces 133:13	relationship	rep 44:14	representation
receptor 121:15	133:13,23	78:15 89:3	repeat 5:23,23	3:21 65:7 89:2
121:16,20	reducing 136:14	114:19 120:9	29:4	89:10,17

				. Tage 170
162:17,23	resources 106:2	102:13	139:15 140:2	rude 161:20
168:8 169:16	respect 87:21	reviewing 64:21	140:16,21	Rules 1:23
representatives	132:16 148:18	revolution 137:8	141:18 146:13	run 23:25 63:6,7
34:4,9,10,13	respond 148:7	Rice 10:5 24:1	147:12,13,24	63:8,9 105:22
represented	responding	42:25 43:11,20	148:1,23 149:2	running 10:17
25:18 162:20	110:11,12,16	44:4,4 138:16	149:4,16 150:9	49:12 62:23
162:22	148:10	140:10,16	150:18 151:20	runs 112:8
reproduce 134:5	responds 114:3	rich 83:19	152:4,6,9,12	118:23
reproduction	response 38:9	Richard 6:10	153:7 154:2,11	
118:22	141:8	rid 141:25	155:7,8,13,20	S
Republican 4:1	responsive 14:15	162:18	156:8,22 157:6	S 2:1
14:6 61:4 63:5	14:20 38:7	right 5:25 6:14	157:10,20	safer 115:21,22
65:8 107:6,8	105:13	11:14 22:11	159:12 160:11	115:22
108:9 128:19	rest 46:17	25:16 34:23	161:24 162:19	salience 130:20
129:1,4,19,19	118:21 143:1	35:3,3,3,10	163:1,13,23	San 2:10 168:24
131:3 143:13	145:12	37:17 46:5	164:25 169:8	168:24
143:15 165:5	resting 116:1	49:13 50:8	169:21	sanctity 113:16
Republican's	result 32:11,17	53:7,20 55:13	rights 15:17,18	sanitizer 116:18
132:21	49:18,20 62:10	56:16 58:11,16	19:11 33:15	116:24
Republicans	65:3 74:7 76:8	58:20,24 61:6	37:18	satisfactory 80:7
63:6,9 118:11	80:1 84:21	63:4 64:13	ring 142:9	satisfied 31:3
131:6 143:6	87:6 95:20	75:9 76:4 78:3	rob 149:6	saw 67:21 68:7
reputation	118:22 157:10	82:2 83:19,24	Robert 3:15	98:13
44:11,13 106:1	results 21:18	83:25 84:25	15:9	saying 6:5 61:16
request 29:12	32:4 48:10,24	86:16,17 87:3	robust 85:19	90:10,11,13,13
requested	70:2 74:12	88:15,16 89:14	Rochelle 1:20	90:15 112:17
173:16	79:25 103:5	90:19 91:21	172:13 174:5	113:16 119:12
require 72:22	123:4	95:24 97:16	rock 31:19	135:21 138:20
requirements	retained 16:21	98:24 99:1,24	Roeder 2:14	157:4 169:12
85:10	retinue 11:25	100:10 104:7	role 38:10	says 29:6 39:22
requires 72:17	retired 10:23,24	107:9,15,20	165:12	93:16,16 98:2
109:5	return 172:22	108:1,20	roll 139:1	98:14 112:5
research 9:7	returns 66:3	109:25 112:10	rolloff 74:24	124:22 148:25
45:1,10,13	reveal 84:12	112:13,17,20	Rome 2:4	155:5,6,9,10
46:1,10,11	reverse 85:1	115:5,10,14,18	rose-colored	SBISD 1:22
47:5 108:3	review 13:7	116:3,22	115:15	16:12,17 18:11
131:22 145:15	14:19,20 16:1	118:15,22	rotting 116:14	33:1 38:13,15
145:17 146:12	47:24 64:15,22	122:16 124:22	rough 21:12,13	38:20,21 40:14
147:16,17,18	65:18 66:5	126:7 127:6	21:18,22 22:19	41:5,11 42:2,5
168:1,9,14,21	67:8 68:17	129:10 131:1,4	70:17	63:18 64:1
researcher 55:24	69:16 88:14	131:8 132:10	roughly 6:23	65:22 66:3
168:5	97:18 119:16	133:10,13,21	7:11 18:8	67:1 71:4
resemblance	147:9 173:15	134:2,4 135:8	41:24 52:7,8	73:11 93:1,5
161:22	reviewed 64:24	135:9,14,15,21	70:11 144:6	94:10 95:6,23
reserve 169:22	64:24 69:12,17	136:8,10,15	routinely 49:1	96:20,22,23,25 100:12,19,21
reset 35:4	69:18 100:18	137:4,7,12,17	50:5	100:12,19,21
resolution 15:13	101:13 102:5	138:4,4 139:2	row 61:15,17,22	101.13,14
	•	•	•	•

				Page 199
102:5,7,13,13	scientific 47:22	155:2,7,15	sensitivity 124:1	113:20 117:2,9
102:14 103:1,2	71:18 157:24	159:12 164:18	124:4,22,23	118:22 137:16
103:22 104:6	157:25	164:21 166:24	sentence 91:2	137:18,23
104:18,20	scientifically	167:2	126:22,23	138:3,12
105:2,7,10,12	46:18 47:18	seeing 13:9	148:24 167:4	141:16 142:6
105:14 160:7	scientist 62:15	31:15 112:7,7	sentencing	sexually 134:5
164:1 169:5	127:11,17	115:19	148:23 149:15	shah 11:14,15
SBISD's 94:17	scoff 163:3	seen 13:4,19	sentiment 40:2	Shah 11.14,13 Shakra 2:19
94:22	scope 37:12,23	144:14	separate 82:2	27:11,13,15,22
scale 44:21	40:16 41:14	segregated	108:22 121:8	166:25 167:2,6
51:23,24 52:1	97:21 99:16	89:15	121:22 122:1	167:13
52:3,4 53:9,11	100:25	segregating	154:11 158:11	shaped 99:8
56:24 57:9	scopes 47:15	119:5	164:17	shaped 99.6 share 118:7
78:25 116:8	score 78:8 85:24	seldom 81:2	separated	119:4 131:18
144:8,14	123:13,17	selecting 77:22	108:20	shared 24:25
scales 80:17	124:9 125:3,5	self-identificat	separately 82:11	30:7 33:4,5
Scalia 155:9	125:18 126:20	130:12	separates 158:14	77:6 143:14
scarier 115:19	scratch 112:9	self-identificat	separating 82:1	Sharman 7:8
scarrer 113.19 scary 115:20	se 168:1	130:13	151:17	sharp 143:20
scatter 70:16	se 108.1 seal 26:21 27:2	selfish 151:22	series 7:8 75:2	sharp 143.20 shelter 114:2
79:11	171:14	152:7,7	112:22 117:1	134:6
scattered 71:22	second 6:1 22:23	semicontinuous	162:6 168:19	shift 17:3
scheme 16:22	22:24 27:18	78:16	seriously 19:9	shifted 129:13
108:4 117:8	91:1,2,24	Senate 162:2	160:19	shirted 129.13 shocked 68:7
scholar 44:11,13	152:8 162:4	senator 128:23	serve 114:21	short 8:7 58:22
44:19 46:21	Section 15:18	sense 16:4,12	served 145:17	136:10 162:18
	19:11 33:14	18:18 39:7,16	150:12	shorthand 1:21
scholarly 45:1 school 1:7 4:4				172:13
	34:1 156:9 sections 145:20	39:25 40:12	serviceable	
6:13,16,21		41:19 46:3	159:20	shortly 24:19
7:21,23 11:7,8 15:11 25:18	securing 113:25	50:14 52:22	Services 3:23	show 73:10
29:7 45:12,24	Security 149:21	53:6,11 54:17	set 17:25 19:25	75:23,23 158:4
· · · · · · · · · · · · · · · · · · ·	150:8	56:18 57:11	22:23,24 32:19	168:13
91:6 94:17	see 12:4 13:10	59:6 70:18	60:21 62:3	showed 28:14
95:7 96:17	23:2 26:21	74:4 84:7,9,10	71:22,22 81:11	showing 77:4
99:5 131:4,4	27:22 28:23	84:16 95:17	89:6 93:23	113:11
131:12,13	29:2 40:23	105:25 106:7	113:7 117:25	shows 73:1
161:6,16	49:4 53:4	109:13 111:8	120:22 158:11	74:11 128:12
165:25 166:14	63:24 64:4,7	111:24 117:20	sets 156:6	168:10,13
168:10 172:7	68:3 70:12,16	121:9 129:14	setting 59:12	side 49:18 56:19
science 45:9,13	70:25 76:18	129:23 135:16	116:11,12	56:20 115:18
45:22 55:24	90:5 91:23	136:25 149:17	settings 59:13	115:19 116:18
73:5 85:21	101:19,25	153:19,20	144:12	116:19 129:22
107:15 130:18	108:11,23	157:22,24	settled 11:4,7	140:5,5 150:10
157:25	115:6,10,14	159:16 161:9	seven 17:20	154:8 155:15
sciences 45:21	119:2,2 124:2	162:21 168:14	Seventy 56:9	155:19
80:18,23 83:18	127:9 135:22	sensing 114:23	sex 113:14	sides 36:20,21
84:1	137:16 142:2	sensitive 151:11	sexual 113:8,15	sign 155:5
	l 	<u> </u>	l 	I

				1490 200
signal 108:19,20	163:12 165:7	133:9 140:17	11:22 14:9	10:18 128:23
108:21 158:14	165:12 166:11	smell 120:21	15:5 17:8,12	129:13 172:1
signals 85:3	166:16 169:7	121:19 122:4	17:13 18:4,13	southwest 37:21
108:20	169:11	smells 121:2	18:21 19:13	spaces 144:19
signature 3:5	sister 12:20	Smith 145:12,22	20:13,16,25	span 75:1
158:4,16 164:4	site 168:19	soap 122:18,19	21:9,11,17	Spanish 90:25
170:1 171:1	sitting 33:7	122:20	22:12 23:1	91:4,8
172:22	82:12	social 45:9,13,21	24:14,17 28:9	speaking 133:18
significance	situation 54:18	47:22 55:24	29:14,22 30:13	specific 15:5
23:23 72:15,17	59:6,10 150:16	62:15 71:18	31:3,7 32:18	42:13,13 69:23
73:2,6,16,18	153:15	73:5 80:18,22	34:1 37:20	77:12 78:5
76:21 123:10	situations 122:3	83:18 84:1	38:25 39:6	80:8 112:19
significant 71:3	150:11	85:21 125:15	40:22 41:18,19	113:7 121:14
73:3 74:5,18	six 12:4 91:9	126:16 127:11	41:20 43:25	specifically
126:15,24	158:3	127:17 130:18	45:7 51:22	37:20 146:18
significantly	Sixty 52:25	132:22 134:1	52:7,8,18 53:2	146:22 147:10
93:8,10 114:7	skill 48:14	135:3,4 149:20	53:10,12 56:11	specification
signs 139:20	skilled 45:20	150:8	56:14 59:8,9	84:13,24,25
similar 120:23	skillfully 46:9	socially 153:11	62:3 63:14	specifics 65:15
124:12	skin 113:10,12	societies 137:9	65:2 70:6	77:10
similarity 91:12	135:10,11,13	Society 140:9,12	74:23 75:1,3	specified 84:19
simple 117:5	135:22 136:9	140:14,15	79:10 90:2	84:20
simply 107:11	140:6 142:20	socioeconomic	97:21 105:17	spectacular 7:24
151:16	skinned 136:19	105:3	105:18,19	spectrum 130:9
simultaneously	Slates 146:18	sociopaths	120:5,25	155:3,3,16
67:17	slating 104:23	151:23	128:15 129:14	speculate 64:10
single 19:6 59:24	104:25	solid 31:19	131:3 132:7	spent 8:3 11:1
76:6 81:14	slide 57:1	solution 57:22	133:21 134:8	67:21 139:6
121:15 162:5	sliding 56:24	58:4,6,18	135:6 143:21	spicy 120:24
single-member	slight 134:9	137:2,3,15	145:10,13,18	split 116:17
14:5 16:24	156:25	141:21	147:23 148:9	splitting 57:7
19:12 22:22	slightly 120:16	solutions 141:19	148:17,19,22	58:21
88:19 89:1,9	125:6,6 134:14	solve 32:14	151:4 152:8	spreads 119:2
89:16 95:8	slippery 51:19	58:12,12 76:7	153:7,7,15,17	spreadsheet
97:19 100:14	slope 51:20	76:13 162:17	155:14 156:13	67:11,20
160:15 161:19	93:22	solved 76:14	159:18 165:13	Spring 1:6 14:25
162:1,6,10	slopes 71:25	solves 82:24	165:21 168:3	29:7 91:6,10
168:9 169:19	72:3	83:1 162:23	168:12,15,20	157:4,6 172:6
sinuses 121:12	slow 133:1	somebody 35:21	sorts 76:22	square 76:23
sir 6:11 13:4	slowly 132:25	83:5,5 113:12	sound 126:4	127:11,13
24:8 25:6 29:2	150:13	146:15 149:20	sounds 30:5	squared 123:19
33:11 40:18	smack 161:22	someplace 67:11	37:5 78:20	squares 27:8
41:15 42:24	small 94:4,5	sorry 13:20 25:8	126:6	28:13 46:24
69:3 87:10,18	95:12,14,18	25:11 35:4	source 166:13	47:14,17 79:13
92:4 100:10	132:14 159:7	37:7 43:16	168:17 169:4	79:15
124:14 125:24	161:13 163:11 smart 55:23	60:12 113:3	southeast 37:21	SSN 166:13
126:18 144:21	Smart 55:25	sort 7:21 8:4	southern 1:1	SSR 91:14

	<u> </u>	1	<u> </u>	
SSRV 91:4	statistical 23:22	strongly 146:16	substantially	62:6,7 102:14
SSVR 91:14	24:2 45:10,13	147:25 151:4,7	82:20	103:2 118:12
92:17,20 93:5	50:6 72:14,17	structures	substantive 32:7	supporting
stability 48:10	73:2,6,15,18	117:25	subtle 105:6	42:17
stage 16:9 24:16	76:21	struggle 134:8	135:24	supports 53:15
stages 106:11	statistically 73:3	stuck 83:4	subtraction	suppose 68:23
145:18	74:18	student 139:23	109:1	supposed 114:14
staggered 17:25	statistics 85:8	140:7,25	successful	149:25 160:9
stand 36:20 61:8	statute 33:18,20	students 94:10	133:20	168:4
123:15 124:7	stay 97:23	98:8 105:24	sued 18:22	Supreme 155:24
125:1 126:7,18	staying 129:15	106:3 116:6,16	24:13	sure 5:24 12:21
standard 19:17	Stein 3:15 41:8	116:22,23	sufficiency 88:1	13:8 14:22
23:20 150:2,4	42:21,22 43:18	131:13 132:7	sufficient 48:18	15:4,15 16:20
standards 73:5	44:2,20 45:12	137:5 138:15	48:25 49:6	21:1 22:14
standing 34:8	46:20 48:13	138:16 139:23	87:15 88:4	24:13 26:5
stare 139:20	49:5 50:1 67:2	149:18	108:15,16	28:9,24 29:21
start 51:1,20,21	69:24 73:9	studies 35:21	sufficiently 57:8	29:23 30:11,11
105:24 128:16	89:24 90:10	44:23 74:10	100:13,21	30:14 32:10
128:17	Stein's 14:8 38:7	89:4	103:23	39:22 40:8
started 15:21	38:11 40:20	study 8:20,21,24	suggest 52:2	42:14 50:11
16:3 33:24	41:25 46:14	106:21 107:4	79:6 87:13	59:1 62:20
starting 52:14	48:17 49:9	114:11 116:14	108:16	64:9,16 67:4
125:21	64:25 69:8,9	116:15,16	suggested 89:25	68:20 69:16,19
startle 114:5,5,7	69:12 71:10	119:8,8,18,24	suggesting 83:8	70:4,13 72:21
114:11,14,19	73:1 77:21	120:2 144:9,10	suggestion	86:9 87:11
startled 114:10	78:6 86:21	144:11	142:14	88:14 100:2
114:12,17	87:14 97:18	stuff 11:23 22:16	suggests 40:25	101:24 103:6
115:1	101:11 123:22	45:7 106:12	41:25 79:8	104:11 108:1
startling 114:8	124:18 125:10	146:10 155:19	suit 15:23 24:3,6	114:15 116:10
starts 91:2	126:11 127:23	stupid 27:20	24:10 36:1,3	120:12 129:8,9
state 1:21 34:10	Stevenson 23:25	subconscious	36:14	131:15 136:1
35:10,23,23	68:20,22,23,24	159:8	Suite 2:5,15	141:4 144:18
36:3,13,19	stick 143:20	subject 29:8	174:7	146:7,25 147:2
37:11 116:1	stimulus 60:21	112:14 169:8	summaries	163:16,17
156:6 171:7,18	stood 161:17	subjected 47:24	168:21	164:13 166:13
172:14	stop 57:20	subjects 158:3	summarizing	167:16 169:4
stated 1:24	112:19 139:3,4	submitted	169:2	surface 112:10
statement 64:3	139:5 143:19	172:20	summary 20:3,7	surname 62:16
65:5	stories 8:6	subpoena 13:10	81:3 169:17	75:8,19 77:15
states 1:1 10:23	strange 12:2,12	14:16 29:2	summer 28:7	77:23 90:25
46:7 51:9	Street 1:22	subscribed	30:6	91:4,8 96:10
107:4 158:1	stress-tested	171:13	superior 47:4	surnames 31:18
161:24 162:1,8	32:18	subset 92:25	superseded	32:9
172:1	strike 98:21	93:1 97:10	30:22	surprise 101:5
stationed 10:15	strong 130:13,14	122:6	supply 10:18	101:11
statistic 72:12	133:7 148:4	substantial 79:1	support 42:4	surprised 32:7
79:10 81:4	154:6	120:20	56:4 59:17,18	71:8 94:19,20
	•		•	•

94:24 95:3 118:14 127:8 tell 19:23 27:17 testimony 16:1 54:10,13 56:16 96:16 101:7 132:17 144:9 55:12 60:7 55:23 60:13 59:9 65:2,3,4 surpryisingly 144:10 149:8 61:10 68:6 104:10 172:18 75:25 76:3,5 75:25 76:3,5 85:19 149:25 154:1,1 74:16,17 86:10 173:5 80:20 81:8 80:20 81:8 surveyed 77:12 taken 1:18 5:13 111:1,18 120:16 84:14 85:14 85:19 suryival 134:3 87:12 173:5,20 118:10 131:13 18:10 131:13 Texans 130:11 97:20 105:25 suspect 42:15 48k 5:20 19:23 131:15 132:6 Texans 130:11 97:20 105:25 98:15 155:25 talented 139:23 137:5 138:15 2:55,510,15 4:1 111:7 112:18 suspicious 153:2 26:1 42:20 146:4 147:9 64:1 65:8 112:22,23,24 sweth 36:20,21 134:24 135:8 131:17 telling 6:8 30:24 157:7 165:5 122:4 129:20 sworn 1:18 5:3 172:17 145:15 tend 4:22 166:11 47:22 172:1,14 174:5 133:1,22					1490 202
96:16 101:7 132:17 144:9 55:12 60:7 55:23 60:13 59:9 65:2,3,4 85:19 144:10 149:8 61:10 68:6 76:16,17 86:10 75:25 76:3,5 survey 65:18,21 158:11,15 98:5 110:24 173:5 80:20 81:8 surveyed 77:12 taken 1:18 5:13 111:1,18 120:16 84:14 85:14 suspect 42:15 87:12 173:5,20 takes 121:25 131:15 132:6 Texans 130:11 77:22 7 98:15 155:25 156:2,2,3,12 takes 121:25 131:15 132:6 Texans 130:11 77:22,3,22 suspicious 153:2 26:1 42:20 140:4 147:9 46:1 65:8 111:1,15 suspicious 153:2 50:9 58:24 155:20 160:9 92:24 104:5,7 111:23,24 sweat 120:19 110:4,7,9,10 talked 6:83 80:24 131:17 172:1,14 174:5 130:17 132:2 switching 146:17,19 tells 26:15 79:17 174:6 160:22 86:15 110:13 145:1 133:2,8 134:3 165:16 talked 52:15 146:1 110:14 118:19 145:1 133:2,8 134:3 172:17 talken 5:23	94:24 95:3	118:14 127:8	tell 19:23 27:17	testimony 16:1	54:10.13 56:16
surprisingly 144:10 149:8 61:10 68:6 104:10 172:18 75:25 76:3,5 85:19 149:25 154:1,1 74:16,17 86:10 173:5 80:20 81:8 87:25 116:21 163:11 111:1,18 tests storerone 82:17 84:5,11 80:20 81:8 82:17 84:5,11 44:14 85:14 45:14 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:20 81:8 82:17 84:5,11 82:17 84:5,11 80:10 11:4,15 184:18 5:20 182:18 32:1 182:18 32:1 182:18 32:1 182:18 32:1 182:18 32:1 182:18 32:1 182:18 32:1 182:18 32:1 182:14 32:1 182:14 32:1 182:14 32:1 182:14 32:1 182:14 32:1					· ·
85:19 149:25 154:1,1 74:16,17 86:10 173:5 80:20 81:8 survey 65:18,21 158:11,15 98:5 110:24 testosterone 82:17 84:5,11 87:25 116:21 taken 1:18 5:13 112:14,15 testosterone 82:17 84:5,11 surveyed 77:12 taken 1:18 5:13 112:14,15 tests 141:23 86:15 87:22 survey 47:12 takes 121:25 131:15 132:6 tests 141:23 77:20 105:25 suspect 42:15 takes 121:25 131:15 132:6 Texas 1:1,21,23 108:6 111:4,5 98:15 155:25 talented 139:23 137:5 138:15 2:5,5,10,15 4:1 111:7 112:18 suspicious 153:2 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 111:7 112:18 swich 36:20,21 134:24 135:8 163:2 141:6 143:6,19 117:2 121:1,21 switching 146:17,19 tells 26:15 79:17 174:7 174:7 132:17 174:7 133:2,2 sworn 1:18 5:3 58:25 108:8 12:13,20 30:4 tempted 83:17 Thank 33:11 135:123 144:19 144:15 symdrome 71:17,17 72:12 <td></td> <td></td> <td></td> <td></td> <td>, ,</td>					, ,
survey 65:18,21 158:11,15 98:5 110:24 testosterone 82:17 84:5,11 87:25 116:21 163:11 111:1,18 120:16 84:14 85:14 survival 134:3 87:12 173:5,20 118:10 131:13 tests 141:23 86:15 87:22 suspect 42:15 48kes 121:25 131:15 132:6 Texas 1:1,21.23 108:6 111:4,5 98:15 155:25 talented 139:23 137:5 138:15 2:5,5,10,15 4:1 111:7 112:18 156:2,2,3,12 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 108:6 111:4,5 suspicious 153:2 50:9 58:24 155:20 160:9 92:24 104:5,7 114:23,24 153:8 64:13 83:10 163:2 141:16 143:6,19 117:2 121:1,21 sweat 120:19 110:47,9,10 telling 6:8 30:24 157:7 165:5 122:4 129:20 switching 147:6 160:22 134:24 135:8 110:14 118:19 145:21 133:2,8 134:3 172:17 145:15 tempted 83:17 text 92:6 145:10 133:2,8 134:3 symptom 85:24 59:14 109:11 133:5,6 tendency 128:21 151:23 144:19 146	1 00				,
87:25 116:21 163:11 111:1,18 120:16 84:14 85:14 survival 134:3 87:12 173:5,20 118:10 131:13 Texans 130:11 97:20 105:25 suspect 42:15 takes 121:25 talkes 121:25 131:15 132:6 Texans 130:11 108:6 111:4,5 98:15 155:25 talented 139:23 137:5 138:15 2:5,5,10,15 4:1 111:7 112:18 156:2,2,3,12 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 112:22,23,24 suspicion 32:21 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 112:22,23,24 suspicious 153:2 59:8:24 155:20 160:9 92:24 104:5,7 112:22,23,24 153:8 64:13 83:10 163:2 141:6 143:6,19 117:2 121:1,21 switching 146:17,19 telling 6:8 30:24 157:77 165:5 122:4 129:20 switching 147:6 160:22 168:5 110:13 145:21 134:7 174:7 132:1,23 134:3 135:7, 165:5 132:1,32,03 145:21 134:1,23 134:1,23 134:1,23 134:1,23 134:1,23 134:1,23 134:1,23 134:1,2		,	· ·		
surveyed 77:12 taken 1:18 5:13 112:14,15 tests 141:23 86:15 87:22 suspect 42:15 takes 121:25 118:10 131:13 Texans 130:11 97:20 105:25 98:15 155:25 talented 139:23 137:5 138:15 2:55,5,10,15 4:1 111:7 112:18 156:2,2,3,12 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 111:7 112:18 suspicions 153:2 26:1 42:20 146:4 147:9 64:1 65:8 113:15 111:4 swepticions 153:2 50:9 58:24 155:20 160:9 92:24 104:5,7 114:23,24 153:8 64:13 83:10 163:2 141:6 143:6,19 117:2 121:1,21 switch 36:20,21 134:24 135:8 131:17 147:1 17:2 121:1,21 switching 147:6 160:22 147:6 160:22 10:14 118:19 174:7 133:2,8 134:3 165:16 talked 52:15 110:14 118:19 145:21 133:2,8 134:3 symmetric 53:6 symptom 85:24 12:13,20 30:4 tempted 83:17 tend 4:22 15:23 145:11 100:10 166:11 136:22,23 141:10 10:20 141:10 9:10					,
survival 134:3 87:12 173:5,20 118:10 131:13 Texans 130:11 97:20 105:25 suspect 42:15 takes 121:25 131:15 132:6 Texas 1:1,21,23 108:6 111:4,5 98:15 155:25 talented 139:23 137:5 138:15 2:5,5,10,15 4:1 111:7 112:18 156:2,2,3,12 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 112:22,23,24 suspicions 2:21 56:9 58:24 155:20 160:9 92:24 104:5,7 112:22,23,24 tsuspicious 153:2 50:9 58:24 163:2 141:6 143:6,19 117:2 121:1,21 sweat 120:19 110:4,7,9,10 telling 6:8 30:24 157:7 165:5 122:4 129:20 switching 147:6 160:22 86:15 110:13 172:1,14 174:5 130:17 132:2 sworn 1:18 5:3 172:17 talked 52:15 110:14 118:19 tempted 83:17 tend 45:21 133:7,12,25 symptom 85:24 151:16 128:23 147:15 128:23 147:15 133:5,6 tend 152:6 tend 152:6 thankfully 136:22,23 synopsis 168:3 169:18,20 146:21 55:14,14 85:7 55:3 56:15 150:25 15					
suspect 42:15 takes 121:25 131:15 132:6 Texas 1:1,21,23 108:6 111:4,5 98:15 155:25 14ented 139:23 137:5 138:15 2:5,5,10,15 4:1 111:7 112:18 suspicion 32:21 26:1 42:20 146:4 147:9 6:12 63:1,5 112:22,23,24 suspicious 153:2 50:9 58:24 155:20 160:9 92:24 104:5,7 114:23,24 153:8 64:13 83:10 163:2 141:6 143:6,19 117:2 121:1,21 sweat 120:19 110:4,7,9,10 163:2 141:6 143:6,19 117:2 121:1,21 switch 36:20,21 134:24 135:8 131:17 172:1,14 174:5 130:17 132:2 168:8 146:17,19 telling 6:8 30:24 157:7 165:5 122:4 129:20 switching 147:6 160:22 talked 52:15 110:13 text 92:6 145:10 133:2,8 134:3 172:17 145:15 talked 52:15 tempted 83:17 text 92:6 145:10 136:22,23 symptom 85:24 12:13,20 30:4 tend 4:22 100:10 166:11 136:12,14,15 symptom 85:24 12:17,17 72:12 tends 79:5 85:15 tends 79:5 85:15 <td< td=""><td>Č</td><td></td><td></td><td></td><td></td></td<>	Č				
98:15 155:25 talented 139:23 137:5 138:15 2:5,5,10,15 4:1 111:7 112:18 suspicion 32:21 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 112:22,23,24 suspicious 153:2 26:1 42:20 146:4 147:9 64:1 65:8 113:15 114:4 sweat 120:19 50:9 58:24 155:20 160:9 92:24 104:5,7 114:23,24 switch 36:20,21 134:24 135:8 163:2 141:6 143:6,19 117:2 121:1,21 switching 147:6 160:22 talked 52:15 10:14 118:19 172:1,14 174:5 130:17 132:2 sworn 1:18 5:3 58:25 108:8 tempted 83:17 tended 139:23 telling 6:8 30:24 141:6 143:6,19 117:2 121:1,21 112:122,23,24 112:12,12 122:14 129:20 122:14 129:20 122:14 129:20 129:20 129:20 129:20 129:20 129:20 129:20 129:20 129:20 133:25,22 124:13 13:17 124:13 13:17 124:13 13:17 124:14 174:5 130:17 132:2 134:15 10:13 <td></td> <td>· ·</td> <td></td> <td></td> <td></td>		· ·			
156:2,2,3,12 talk 5:20 19:23 141:10 142:8 6:12 63:1,5 112:22,23,24 suspicious 153:2 50:9 58:24 155:20 160:9 92:24 104:5,7 114:23,24 153:8 64:13 83:10 163:2 141:6 143:6,19 117:2 121:1,21 sweat 120:19 134:24 135:8 131:17 157:7 165:5 122:4 129:20 switch 36:20,21 134:24 135:8 131:17 172:1,14 174:5 130:17 132:2 switching 147:6 160:22 86:15 110:13 145:21 133:2,8 134:3 172:17 talked 52:15 110:14 118:19 text 92:6 145:10 133:2,8 134:3 172:17 talking 8:3 12:13,20 30:4 tempted 83:17 tend 152:6 thankfully 136:22,23 symptom 85:24 12:13,20 30:4 tendency 128:21 thankfully 136:22,23 141:23 151:15 128:23 147:15 tends 79:5 85:15 they'd 115:16 147:24,24 synpopsis 168:3 169:18,20 55:14,14 85:7 55:3 56:15 150:25 151:1,1 system 16:24 18:11 104:20 146:21 55:14,1485:7 55:3 56:15	_			, ,	· · · · · · · · · · · · · · · · · · ·
suspicion 32:21 26:1 42:20 146:4 147:9 64:1 65:8 113:15 114:4 suspicious 153:2 50:9 58:24 155:20 160:9 92:24 104:5,7 114:23,24 153:8 64:13 83:10 163:2 141:6 143:6,19 117:2 121:1,21 sweat 120:19 110:4,7,9,10 telling 6:8 30:24 157:7 165:5 122:4 129:20 switch 36:20,21 134:24 135:8 131:17 172:1,14 174:5 130:17 132:2 168:8 146:17,19 tells 26:15 79:17 174:7 132:15,22 switching 147:6 160:22 86:15 110:13 145:21 133:2,8 134:3 165:16 talked 52:15 110:14 118:19 text 92:6 145:10 133:2,8 134:3 172:17 45:15 tempted 83:17 tend 4:22 150:10 166:11 136:12,14,15 symptom 85:24 12:13,20 30:4 tend 152:6 tendency 128:21 thankfully 136:22,23 141:23 151:15 151:16 128:23 147:15 67:12 tenth 19:16 thing 14:9 19:13 145:14 146:13 system 16:24 talke 72:23 terms 16:9 17:25 55:3,56:					
suspicious 153:2 50:9 58:24 155:20 160:9 92:24 104:5,7 114:23,24 153:8 64:13 83:10 163:2 141:6 143:6,19 117:2 121:1,21 sweat 120:19 110:4,7,9,10 telling 6:8 30:24 157:7 165:5 122:4 129:20 switch 36:20,21 134:24 135:8 131:17 172:1,14 174:5 130:17 132:2 168:8 146:17,19 tells 26:15 79:17 text 92:6 145:10 133:2,8 134:3 165:16 talked 52:15 110:14 118:19 text 92:6 145:10 133:2,8 134:3 172:17 145:15 tempted 83:17 text 92:6 145:10 133:2,8 134:3 172:17 145:15 tend 152:6 tend 152:6 tend 152:6 tends 79:5 85:15 100:10 166:11 136:12,14,15 symptom 85:24 12:13,20 30:4 tend 152:6 tends 79:5 85:15 theirs 139:20 145:14 146:13 151:16 128:23 147:15 169:18,20 67:12 tenth 19:16 thing 14:9 19:13 153:11,12 system 16:24 18:11 104:20 146:21 55:14,1485:7 55:3 56:15 156:3,20 15				,	
153:8 64:13 83:10 163:2 141:6 143:6,19 117:2 121:1,21 sweat 120:19 110:4,7,9,10 134:24 135:8 131:17 157:7 165:5 122:4 129:20 switch 36:20,21 134:24 135:8 131:17 172:1,14 174:5 130:17 132:2 130:17 132:2 switching 147:6 160:22 86:15 110:13 145:21 133:2,8 134:3 132:15,22 sworn 1:18 5:3 58:25 108:8 tempted 83:17 text 92:6 145:10 133:2,8 134:3 135:7,12,25 symptom 85:24 58:25 108:8 tempted 83:17 Thank 33:11 135:7,12,25 135:7,12,25 symptom 85:24 talking 8:3 tendency 128:21 thankfully 136:22,23 141:6 143:6,19 130:17 132:2 130:17 132:2 130:17 132:2 132:15,22 132:15,22 132:15,22 133:2,8 134:3 131:17 144:5 145:21 133:2,8 134:3 131:7,7 135:6 145:21 133:2,8 134:3 145:21 136:12,14,15 136:12,14,15 136:12,14,15 146:11 136:12,14,15 136:12,14,15 151:12 151:12 151:12 151:12 145:14 14:61	-				
sweat 120:19 110:4,7,9,10 telling 6:8 30:24 157:7 165:5 122:4 129:20 switch 36:20,21 134:24 135:8 131:17 tells 26:15 79:17 174:7 130:17 132:2 switching 147:6 160:22 86:15 110:13 text 92:6 145:10 133:2,8 134:3 165:16 talked 52:15 10:14 118:19 text 92:6 145:10 133:2,8 134:3 sworn 1:18 5:3 172:17 tempted 83:17 Thank 33:11 135:7,12,25 symmetric 53:6 talking 8:3 tempted 83:17 tend 152:6 thankfully 136:22,23 symptome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 this 19:20 this 19:16 151:16 128:23 147:15 169:18,20 67:12 thing 14:9 19:13 153:11,12 system 16:24 talks 72:23 term 39:8 51:2,2 thing 14:9 19:13 153:11,12 159:17,18,24 talks 46:14 70:10 148:9 85:13 92:14 160:1,1,23 159:17,18,24 task 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 taste	_			,	· ·
switch 36:20,21 134:24 135:8 131:17 172:1,14 174:5 130:17 132:2 switching 146:17,19 tells 26:15 79:17 text 92:6 145:10 133:2,8 134:3 165:16 talked 52:15 110:14 118:19 text 92:6 145:10 133:2,8 134:3 sworn 1:18 5:3 58:25 108:8 tempted 83:17 Thank 33:11 135:7,12,25 symmetric 53:6 talking 8:3 tend 152:6 thankfully 136:22,23 symtome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 145:14 146:13 151:16 128:23 147:15 tenth 19:16 thin 83:19 150:25 151:1,1 synopsis 168:3 169:18,20 67:12 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 160:23 taste 122:17,17 160:23 124:3 133:24 164:16 165:21 1				,	
168:8 146:17,19 tells 26:15 79:17 174:7 132:15,22 switching 147:6 160:22 486:15 110:13 text 92:6 145:10 133:2,8 134:3 165:16 talked 52:15 110:14 118:19 text 92:6 145:10 133:2,8 134:3 sworn 1:18 5:3 58:25 108:8 tempted 83:17 thank 33:11 135:7,12,25 symmetric 53:6 talking 8:3 tend 152:6 tends 79:5 85:15 thankfully 136:22,23 syndrome 71:17,17 72:12 95:14 109:11 133:5,6 theirs 139:20 145:14 146:13 151:16 128:23 147:15 169:18,20 67:12 thing 14:9 19:13 153:11,12 synopsis 168:3 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 1					
switching 147:6 160:22 86:15 110:13 text 92:6 145:10 133:2,8 134:3 sworn 1:18 5:3 58:25 108:8 tempted 83:17 Thank 33:11 135:7,12,25 symmetric 53:6 talking 8:3 tend 152:6 thankfully 136:22,23 syndrome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 145:14 146:13 synopsis 168:3 169:18,20 tenth 19:16 thing 14:9 19:13 150:25 151:1,1 system 16:24 talking 8:3 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 talks 72:23 terms 16:9 17:25 47:6 49:25 154:1 155:17 155:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:23 12:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 4 47:2 49:15 160:20 135:2,5 138:13 6:1,14 7:23	,			,	
165:16 talked 52:15 110:14 118:19 145:21 134:7,7 135:6 sworn 1:18 5:3 58:25 108:8 tempted 83:17 Thank 33:11 135:7,12,25 172:17 145:15 ten 44:22 100:10 166:11 136:12,14,15 symetom 85:24 talking 8:3 tend 152:6 thankfully 136:22,23 syndrome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 145:14 146:13 151:16 128:23 147:15 tenth 19:16 thin 83:19 145:21 147:24,24 synopsis 168:3 169:18,20 67:12 thing 14:9 19:13 153:11,12 system 16:24 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 15:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 tanned 135:11 70:10 148:9 85:13 92:14 16:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 test 19:21,22 test 19:2		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·
sworn 1:18 5:3 58:25 108:8 tempted 83:17 Thank 33:11 135:7,12,25 symmetric 53:6 talking 8:3 tend 152:6 thankfully 136:22,23 symtome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 145:14 146:13 151:16 128:23 147:15 tenth 19:16 thing 14:9 19:13 150:25 151:1,1 syntem 16:24 talks 72:23 term 39:8 51:2,2 thing 14:9 19:13 153:11,12 15:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 terrific 118:15 124:3 133:24 161:20 164:14 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23	O				
172:17 145:15 ten 44:22 100:10 166:11 136:12,14,15 symmetric 53:6 talking 8:3 tend 152:6 thankfully 136:22,23 symptom 85:24 12:13,20 30:4 tendency 128:21 thankfully 136:22,23 syndrome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 145:14 146:13 151:16 128:23 147:15 tenth 19:16 thin 83:19 150:25 151:1,1 synopsis 168:3 169:18,20 67:12 thing 14:9 19:13 153:11,12 system 16:24 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 tanned 135:11 37:21 54:19,19 83:25 84:2 160:1,1,23 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 136:1,14 7:23					
symmetric 53:6 talking 8:3 tend 152:6 thankfully 136:22,23 symdrome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 141:9 144:15 151:16 128:23 147:15 128:23 147:15 133:5,6 thing 11:16 147:24,24 151:16 128:23 147:15 tenth 19:16 thing 14:9 19:13 150:25 151:1,1 synopsis 168:3 169:18,20 67:12 thing 14:9 19:13 153:11,12 system 16:24 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 15:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 6:1,14 7:23					, ,
symptom 85:24 12:13,20 30:4 tendency 128:21 151:23 141:9 144:15 syndrome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 145:14 146:13 151:16 95:14 109:11 133:5,6 they'd 115:16 147:24,24 151:16 128:23 147:15 tenth 19:16 thin 83:19 150:25 151:1,1 synopsis 168:3 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 115:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 47:0 49:25 159:12,25 159:12,25 159:12,25 160:1,1,23 159:17,18,24 160:5,21 160:13 164:16 165:21 164:16 165:21	symmetric 53:6				
syndrome 71:17,17 72:12 tends 79:5 85:15 theirs 139:20 145:14 146:13 141:23 151:15 95:14 109:11 133:5,6 they'd 115:16 147:24,24 151:16 128:23 147:15 tenth 19:16 thin 83:19 150:25 151:1,1 synopsis 168:3 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 115:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 tanned 135:11 37:21 54:19,19 83:25 84:2 160:1,1,23 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 6:1,14 7:23	•	O		•	,
141:23 151:15 95:14 109:11 133:5,6 they'd 115:16 147:24,24 151:16 128:23 147:15 tenth 19:16 thin 83:19 150:25 151:1,1 synopsis 168:3 169:18,20 67:12 thing 14:9 19:13 153:11,12 system 16:24 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 115:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 tanned 135:11 37:21 54:19,19 83:25 84:2 160:1,1,23 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23	· -	,	•	theirs 139:20	
151:16 128:23 147:15 tenth 19:16 thin 83:19 150:25 151:1,1 synopsis 168:3 169:18,20 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 115:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 tanned 135:11 37:21 54:19,19 83:25 84:2 160:1,1,23 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23		,			
system 16:24 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 115:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19	151:16	128:23 147:15	· ·	•	,
system 16:24 talks 72:23 term 39:8 51:2,2 47:6 49:25 154:1 155:17 18:11 104:20 146:21 55:14,14 85:7 55:3 56:15 156:3,20 115:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19	synopsis 168:3	169:18,20	67:12	thing 14:9 19:13	,
115:2,2,22 tall 136:10 terms 16:9 17:25 61:14 74:25 159:12,25 135:25 159:16 tanned 135:11 37:21 54:19,19 83:25 84:2 160:1,1,23 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23	• •	talks 72:23	term 39:8 51:2,2	0	154:1 155:17
135:25 159:16 tanned 135:11 37:21 54:19,19 83:25 84:2 160:1,1,23 159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23	· ·	146:21	,	55:3 56:15	156:3,20
159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23	115:2,2,22	tall 136:10	terms 16:9 17:25	61:14 74:25	159:12,25
159:17,18,24 task 46:14 70:10 148:9 85:13 92:14 161:20 164:14 160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23		tanned 135:11	37:21 54:19,19	83:25 84:2	,
160:5,21 tasks 38:16 149:15 160:10 105:19 112:17 164:16 165:21 162:15 165:23 taste 122:17,17 160:23 112:20 116:15 168:5,13,20 systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23	159:17,18,24	task 46:14		85:13 92:14	
162:15 165:23					
systems 22:21 tastes 122:18 terrific 118:15 124:3 133:24 think 5:18,19 taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23	· ·	taste 122:17,17	160:23		168:5,13,20
taught 47:2 test 19:21,22 135:2,5 138:13 6:1,14 7:23		· ·	terrific 118:15	124:3 133:24	, ,
\mathbf{r}		taught 47:2	test 19:21,22	135:2,5 138:13	6:1,14 7:23
··· · · · · · · · · · · · · · · · · · · · · · · · · · ·		Taylor 37:2	48:9 51:15,17	140:9,14	12:11 14:21
table 116:21,23 teach 46:1 54:4,23 57:13 141:14 150:17 15:13 16:14,25		•	54:4,23 57:13	141:14 150:17	15:13 16:14,25
123:5 teacher 7:2 57:19 150:18 154:17 17:4,6,23 18:3		teacher 7:2	,	150:18 154:17	· ·
tables 29:18 teaches 148:19 tested 48:2 163:24 168:3 18:4,12 19:2		teaches 148:19	tested 48:2	163:24 168:3	18:4,12 19:2
tacked 14:23 team 7:16 testified 5:3 things 12:8,10 20:10 22:4,18		team 7:16	testified 5:3	things 12:8,10	20:10 22:4,18
take 20:12 24:14 119:14 146:12 36:12 14:10 18:25 23:14,19 24:10		119:14 146:12	36:12	14:10 18:25	23:14,19 24:10
24:16 26:3,25 147:18 testify 90:14,15 20:13 21:3 24:12,17 25:25	, , , , , , , , , , , , , , , , , , ,	147:18	testify 90:14,15	20:13 21:3	24:12,17 25:25
43:22 51:10,12 teasing 109:14 90:17 106:10 22:18 31:4,5,8 26:16 27:4	· ·	teasing 109:14	90:17 106:10	22:18 31:4,5,8	26:16 27:4
58:7 67:8 technique 47:21 testifying 3:23 31:12 45:5,7 28:7,8 30:21		technique 47:21	testifying 3:23	31:12 45:5,7	28:7,8 30:21
77:18 84:11		48:11 73:16	88:4 104:11	45:17 48:19	31:2,11 32:12
91:21 118:13 Ted 62:25 63:4 106:4 50:4 52:16 33:2,23 34:5,6	91:21 118:13	Ted 62:25 63:4	106:4	50:4 52:16	33:2,23 34:5,6
			l	l	l

				-
34:13,17,21	124:21 127:7	47:7 68:1	97:22 101:8	142:15
35:1,1 37:3,16	128:1 130:10	91:25 96:2,12	107:25 112:3	transcript
37:19 39:1,2	130:11,16	128:5 129:6	118:17 121:17	172:17,20
39:15,15,17,20	131:24,25	140:11 152:8	121:19 128:17	173:14,15
39:22,23 40:7	132:1,1,2	168:1,12	132:10,22	translating
40:23 41:16,17	133:7,11,11,22	thoughtful	134:14 139:7	95:15,16
41:24 42:12	133:24 135:1	117:8	141:17 142:12	transmissible
43:6 47:12	136:24,25	thousand 35:5	154:14 160:19	30:15
48:20,20,21,23	137:1,3,14,16	thrall 153:14	163:15 164:22	trap 136:15
48:25,25 49:8	137:23 138:6	threat 114:3	172:24 173:5	trapped 136:17
49:8,12,14,16	140:3 141:13	115:2,2,10	time-bound	treat 149:18
49:24,25 50:13	141:15,16,19	124:22,22	45:11	150:15
52:11,13,17,19	142:11,12,16	threaten 115:25	timeline 15:5	treated 37:21
52:20 53:3,4	143:1 144:17	threatening	times 5:14,15,16	49:20 148:1
53:25 54:2,8,9	148:10,16,21	113:22 115:3	33:13,13,16	149:13 150:7
54:18,23 55:7	148:21 152:2	threats 115:14	61:17,22	150:11 151:5
55:25 56:10,13	152:17,23,24	three 22:12,16	tint 135:9,10	155:22 156:15
56:14,17,18	154:3,10 155:1	29:2 57:16	title 144:21	156:18 157:16
57:23 58:2	155:11,11,23	89:24 119:19	165:4	157:20 158:5
59:14,23 60:2	156:23 157:11	126:2	titled 166:14	treating 150:20
60:3,13,17,22	157:20,25	three-minute	today 13:18 33:7	150:21 157:13
60:24 61:4	158:12 159:14	26:6	45:21 82:13	treatment 37:18
62:2,9 63:23	159:18,19,21	threes 125:22	96:1 138:2	trended 124:3
64:2,2,14	160:4,9,17,19	threshold 17:19	160:7	trends 19:4,5
65:20 70:17,18	161:2,4,6,9,11	18:1 41:20	told 25:3 29:22	81:19
71:2 73:14	162:16,24	51:15,15,17	35:20 116:22	trial 15:13 20:7
75:11,21,24	163:9 165:10	54:3 57:13,19	116:23 160:10	tried 43:7,10
76:5 77:7,18	166:20,21	57:19 87:16	tools 108:4	101:8 137:21
77:18 78:4	167:1,5 168:24	156:6,12	109:14	137:22
79:7 80:4 81:5	168:24	thresholds 17:16	top 44:25 46:20	tries 159:21
81:8 82:12	thinking 9:24	20:4	142:16	trivially 86:8,10
83:17,21 84:6	18:13 19:9	throwing 81:18	topic 63:3 145:3	trouble 154:9
86:10,13,14,14	20:11,18 51:25	thrown 81:9	tort 58:5	true 12:21,23
86:15 87:21	58:6 111:22	till 6:2	totality 20:4	31:12 39:15,16
88:8,16 89:14	133:12 134:15	tilt 128:15	41:20 54:7,14	74:9 80:21
90:4,9,12	139:4,5 147:19	time 6:18 7:11	65:11,13 87:17	91:16 97:7
91:22,23 92:5	157:22 158:1	8:3,5,6,8,9,25	104:12	101:7 108:3
93:7 94:3,13	166:9	9:2,5 12:6 15:9	totals 21:14	112:14 118:3,5
95:22 96:14	thinks 14:19	16:13,15 17:22	tough 140:7	130:6 138:13
97:17 100:21	55:16,17 142:2	18:5,7 19:1	town 11:21	159:5 164:6
103:13,20	149:12	28:19 31:25	traditional	165:6 166:18
105:15 106:5	third 22:24 79:9	32:21 34:19	117:6 153:8	171:2 172:18
109:8,23,24	79:11 166:21	38:18 42:10	traditionally	trump 11:11
110:5,6,7,9	Thomas 154:8	43:5,7,8 45:17	101:19	118:12,14
111:12 112:5	154:19,24	62:14 67:16,21	training 48:14	trustees 105:13
115:4 117:5	thought 9:18	68:3,8 69:5	trait 133:13	try 6:3,4,7 38:22
119:8 124:16	28:2 36:11	75:2 81:13,19	traits 130:1	52:12 107:6
	•	1	1	1

			ĺ	I
132:6	types 33:3	77:10 79:21	unnatural 155:1	89:8 110:7
trying 36:25	typically 17:21	80:5 81:5	unopposed 83:5	158:10
47:9 79:21	23:1,13 58:11	82:12 83:15	unpleasant	values 52:5
83:3 87:20	72:7 73:5	86:20 97:17,24	121:3	146:12 147:23
101:8 104:10	78:10 79:15,16	109:25 117:7	unpleasantness	vanilla 120:23
turf 38:25	130:10	120:13 138:1	120:2	VAP 31:19
Turks 45:14		140:4 146:25	unreasonable	91:20
turn 52:2 87:11	U	159:14	135:18	variable 63:21
90:25 123:1	U 7:22 8:6,9 9:4	understanding	unrelated 119:4	78:23,24 79:18
128:15	10:4 43:9	31:14 37:25	untanned	79:19 81:1,1
turned 12:22	U.S 62:21	40:1 77:6,13	135:11	81:16 84:23
15:19	129:24 162:15	77:24 92:10	unusual 71:22	87:2 132:6
Turner 25:5	UCLA 7:24	104:21 138:10	up-to-date 46:8	variables 78:15
turning 43:13	ultimately 58:3	156:21	upper 53:7	84:24 86:4
turnout 31:14	75:15	understood 31:3	upward 93:21	87:6,7
31:15 32:2,2	umbrella 164:17	55:25 148:25	Urban 161:12	variance 79:3
32:22 141:6	unable 47:12	unexpectedly	Urine 121:1	81:6,16 82:8
turret 12:16,17	unaccountable	113:23	us.' 115:17	82:13,14 83:4
twelve 110:3	162:12	Unfortunately	usability 48:10	variant 23:13
twenty 164:10	unalterably	78:17	use 23:13 36:12	variation 78:23
Twenty-two	151:22	unhappy 43:13	37:1 46:23	79:9,12,18,19
92:3	unbiased 48:7	unified 109:5	52:13 65:6	79:21,24 85:23
twice 43:8 54:6	85:11	uniform 161:17	68:17,20 79:3	107:10,11
83:25 84:2	unbundles 83:2	uniformly 90:8	88:18 91:13	116:7
118:8	uncertain 20:9	Unimaginably	104:20 158:7	varied 21:15
twin 118:2	70:3	11:17	168:22	116:15
twins 118:2,4,8	uncomfortable	unintended	useful 75:14	varies 78:14
118:9,11,13	109:3	109:10,11	76:19 82:1	102:8 114:10
two 23:19,19	underlie 147:20	unique 117:21	83:22 141:15	variety 39:8
26:6 29:13	underlies 72:16	117:23	168:2	44:16 80:21
35:5 40:4 54:2	72:18	uniquely 121:20	usually 23:23	105:21 106:2
54:12 56:16	underlying	uniqueness	56:22,22 76:2	108:4
57:16,19,20	128:20 130:15	117:24	76:3 96:10,14	vary 3:18 17:17
61:3 67:25	130:15	unit 106:20,21	utilities 151:17	111:3,5 112:24
77:10 78:15,17	underpinning	United 1:1 10:23	utility 151:19	119:9 153:10
87:16 108:20	152:5	46:7 51:9	utilized 70:9	vast 99:1,3
110:2 117:20	underspecified	107:4 161:24		VEP 92:14
125:7 138:17	84:13	161:25 172:1	<u>V</u>	Vera 34:23
144:15 165:13	understand 5:21	universally	v 1:5 34:23	verifiable 47:18
168:5,13	6:5,6 23:17	159:22	172:5	verified 48:2
two-minute 26:4	25:19 26:9	universities	valence 120:9	version 98:1
two-thirds	27:4 28:10	131:8	122:11	versus 14:5
145:11	30:1 32:12	university 6:22	valid 76:22	37:21 148:17
two-to-one	40:7 42:20	7:5,10 9:13	86:15	Vienna 10:22
53:18,20	47:9 57:21	10:2,2 43:1,1	valuable 110:7,9	11:2 12:8,10
two-week 68:5	59:14 70:22	43:18 47:3	110:10	12:14,22
type 60:21	71:10 74:22	67:23	value 72:9,11,25	view 31:23 39:6
	1	ı	<u> </u>	1

				1490 203
49:2 52:7	70:15 79:22,23	141:2 143:12	wasn't 9:17,24	81:14 82:12
70:25 90:7	89:4 91:4,5,8	143:12	15:19 16:9	88:12 91:22
129:7 151:2	91:10 95:12,14	wager 158:2	17:7,10 20:25	104:8,8,9
159:11,21,22	95:16,17,19	wait 6:2 141:23	21:4 29:14,21	106:11 110:1
160:24 163:8	97:9 101:19	157:3	29:21,23 31:2	114:25 119:4
viewing 150:20	102:13,14	waive 26:23	43:11,12 78:12	122:23 125:21
views 115:23,24	103:2,3 105:13	waiving 27:2,3	116:19 140:19	125:21,22
violate 85:12,15	108:18 109:23	waking 11:17	watch 7:7	127:15 133:9
85:17	110:8,10,12,18	walks 149:20	water 132:10	133:10 142:19
Virginia 1:3 5:9	111:4 112:4	want 5:24 14:22	way 18:21 31:20	157:6 162:4,16
172:3	157:4,5 160:2	18:19 20:12	39:20 47:5,18	162:17
virtually 32:6	voters' 111:6	22:18 27:16	48:9 49:15,16	we've 5:8 30:4
51:8	votes 21:12	29:1 38:3 39:5	49:22,22 51:24	33:2 44:5
voice 154:15	159:6	43:23 49:4,11	70:14 73:21	58:25 64:20
vote 19:17,19	voting 15:17,18	50:11 52:25	75:9,24 76:1,2	103:20 135:17
21:14 31:25	16:12 19:11	54:12,15 55:11	76:4,4,4 81:25	145:14,15
32:3 39:12,13	20:24 21:6,10	55:13,13,20	86:16,18,18	149:14
40:6 57:6,7	21:24 22:1,6	59:1 60:12	97:11 99:7	weak 132:14
58:17,21 63:7	22:20 33:15	61:17,18 62:18	111:21 112:24	133:5
63:8,11 66:24	37:6,17 38:19	64:10 67:3	120:18 130:10	wear 115:14
74:23,24 89:15	39:11,14,25	79:24 80:12,14	137:14 138:4	web 14:4
103:22 104:7	40:2,5,24	86:21 87:11,11	139:3,10,11	weekend 44:8
106:19,23	46:17 47:19	87:22 103:16	140:23 141:12	weeks 67:25
108:10 130:8	49:2 50:9 54:5	104:11 106:17	141:12,20	weight 26:18
143:21	54:15,21,24	104:11 100:17	142:1,7 146:20	weird 11:17,18
voted 50:16,20	55:11,12,18	123:2 135:6	148:11 150:24	11:25 12:12
50:23	56:21,21 57:4	137:18 142:10	151:2,5 153:17	57:9 140:9
voter 33:18,19	57:10,11,17	144:12,19	153:18,20	weirdly 57:1
46:21 54:13	58:25 59:4,5,7	146:7,17,19	159:5,12,24	well-acquainted
65:21 91:13,17	59:20,24 60:2	147:1,1,2,5,6	162:11 167:15	5:17
92:11 95:5	60:3,6,15,17	149:21,21,23	ways 39:8 49:19	well-known
107:23,24	60:18 61:5,10	150:19 157:16	54:22 117:20	73:20
107.25,24	61:13,23 62:4	157:19 163:4,9	133:14 139:25	well-meaning
141:6	62:11 63:17	163:20,24	151:20 153:3	137:19,21
voter's 108:3	67:6 70:10	164:21 167:14	151.20 155.5	well-respected
voter's 108.3	71:4,12 72:4	wanted 18:10	we'll 6:7 14:21	44:15
22:1 31:13,18	73:10 74:25	20:18 36:1,2	28:23 43:23	went 6:15,16,16
31:18 32:6,9	75:5,16 81:25	143:12,12	49:4 50:10	7:10 8:11,15
32:12 34:6	95:11 104:20	160:20	169:22	9:25,25 11:5,7
37:19,20 39:12	107:6,8,20	wanting 139:4	we're 5:24 19:25	12:22
39:13 40:3,21	107.0,8,20	wanting 137.4 wants 112:18	20:1 22:23	weren't 12:17
40:23,23 41:2	156:24 157:1	149:20	26:3 33:7	22:3 140:19
50:16,20,23	158:21,23,24	war 10:15,16,17	42:20 44:5,5	146:14 153:22
54:24 56:3,4	159:5 160:23	153:19 161:18	46:1,3,4 48:19	Weslayan 174:7
58:13 60:20,23		162:3	54:20 74:19,23	whiff 120:19
60:25 61:12	$\overline{\mathbf{W}}$	Washington	75:1,2,2,4	white 113:23
62:17,25 63:24	W 2:9 118:24	11:2 44:7	79:20,20 81:13	114:9
02.17,23 03.24		11.2 77./	77.20,20 01.13	117./

				Page 200
wide 115:24	36:23 37:8	wrote 68:10,11	101:12 102:3	22:16 29:1
wide 113.24 widely 44:18	43:4 67:16	77:23 87:17	102:12 102:3	58:3 59:10
wife 134:15	68:2 100:21	123:25 125:13	114:17 116:5	99:15,20,20
wild 12:24	164:16	144:20,23	129:3 149:7,8	100:6 123:5
Williams 151:15	works 45:2	155:18	161:17 163:8	160:18
willing 26:23	132:24	133.10	166:1	1.12 119:1
158:2	world 8:8 10:16	X	Yep 53:19	1:59 163:18
win 19:11 20:1	47:9 111:22	x 23:15 31:23	169:10	10 67:14 149:7,8
58:18	115:3,7,15,19	32:2	young 45:14	163:8
wing 129:13	115:3,7,13,19		138:2 140:16	10 3.8 10 / 31 / 23 174:5
witness 1:17	129:6 136:6	Y	younger 12:18	10/31/23 174.3 10:27 1:19
13:23 27:19	142:2 151:2	y'all 167:14	12:19	10:27 1.19 10:54 26:7
29:6 163:13	153:18 159:11	yeah 7:4,9,12,14	12.19	10:54 20.7 10:55 26:8
		7:16,19,19,20	$\overline{\mathbf{z}}$	
167:5,7 169:21 170:2 172:16	161:18 world-renown	7:21 8:1,1,2	zero 51:4,8,21	100 51:21 52:1,3 52:4 53:5
170:2 172:16	7:4	10:8,14 11:11	52:2,3,4,12	55:13 69:1
women 153:9	Worldwide	12:25 13:9	55:12 78:14,14	101 107:15
won 105:9	172:23 174:6	19:20 24:9	78:21 80:11	101 107.13 1050 1:22
wonder 56:3	worms 113:12	25:19 32:16	94:19,24 95:3	119 3:17
128:4 165:12	worse 88:19	33:17 35:8	95:25 119:5	119 3.17 12 80:1
wonderful		37:3,4 40:8	169:15	12 80:1 12th 27:16
122:21	worship 47:13 161:15	43:6 47:1		12th 27.10 13 3:10
	worst 169:15	49:12 53:2,2	0	13,000 94:12
wondering 146:6	worth 68:8	62:9 64:3,12	0.0256 123:20	13,700 94:12 13,700 94:7,9
words 50:10	worth 68.8 wouldn't 64:5	67:19 72:24	124:16	13,700 94:7,9 14 123:1
		76:25 77:21,24	0.0289 125:8	14 125:1 140 5:14
68:14,16	77:25 82:5	86:2 89:21	0.03 126:3	140 5:14 1400 2:5
work 6:7 9:4,7 11:5 16:21	86:17 94:20	90:23 92:8	0.0361 126:4	16 126:21
17:13 16:21	99:3 101:5,7	93:8 94:15	0.04 126:3 127:4	16 126:21 163 3:22 147:11
28:16 33:23	101:11 130:6 140:18,22	102:9 104:10	0.0441 127:5,21	165 4:1 147:11
38:23 43:10	155:10 156:9	104:14 109:23	0.05 74:5,6	165 4:1 147:11 166 4:3
		112:14 115:12	0.16 123:14,19	170-171 3:5
44:18,18 45:3	156:10 158:15	119:11,15	124:10	170-171 3:3 1700 2:15
45:4,6,8,21	158:23 164:19	122:23 127:1	0.17 125:4	1700 2:13 172 3:6
58:11 69:1 74:15 90:1	Wow 12:5 44:9 write 68:9 145:7	127:13 131:20	0.19 125:19	1973 7:25
106:10 111:23	146:10 155:19	131:25 133:17	0.2 80:19	
	write-in 82:4	144:7 146:24	0.21 127:1	1997 35:3
116:4,5,6		154:23 163:2	0.33 79:8	2
119:12 129:20	writing 145:10 166:10	164:20 167:5	0.5 78:20,22	2 3:2,12 15:18
132:3 139:10	written 73:22	year 10:1 11:1	0.7 79:2	16:1 19:11
145:11,12 worked 14:25	145:20	27:12 43:14	00:00 173:1,3	33:14 34:1
15:11 34:2,3		67:16 149:7,7	03:39 173:2	41:19,22 51:14
34:12,15 35:8	wrong 18:3 32:19 34:7	years 10:3 11:2		52:22 54:6,13
35:8 43:24	68:1 134:17,17	12:19 15:5	1	54:23 56:19
44:17 100:19	,	16:18,19 18:8	1 3:10 5:1 13:7	57:17 58:3
working 17:7	137:5,6,8,19 140:3 141:21	22:17 41:5	15:22 18:24	64:15,20 87:14
25:17 33:21	146:20 149:12	42:3 100:19	19:2,7,8 20:8	156:9
23.17 33.21	140.20 149.12			150.7